

1/100

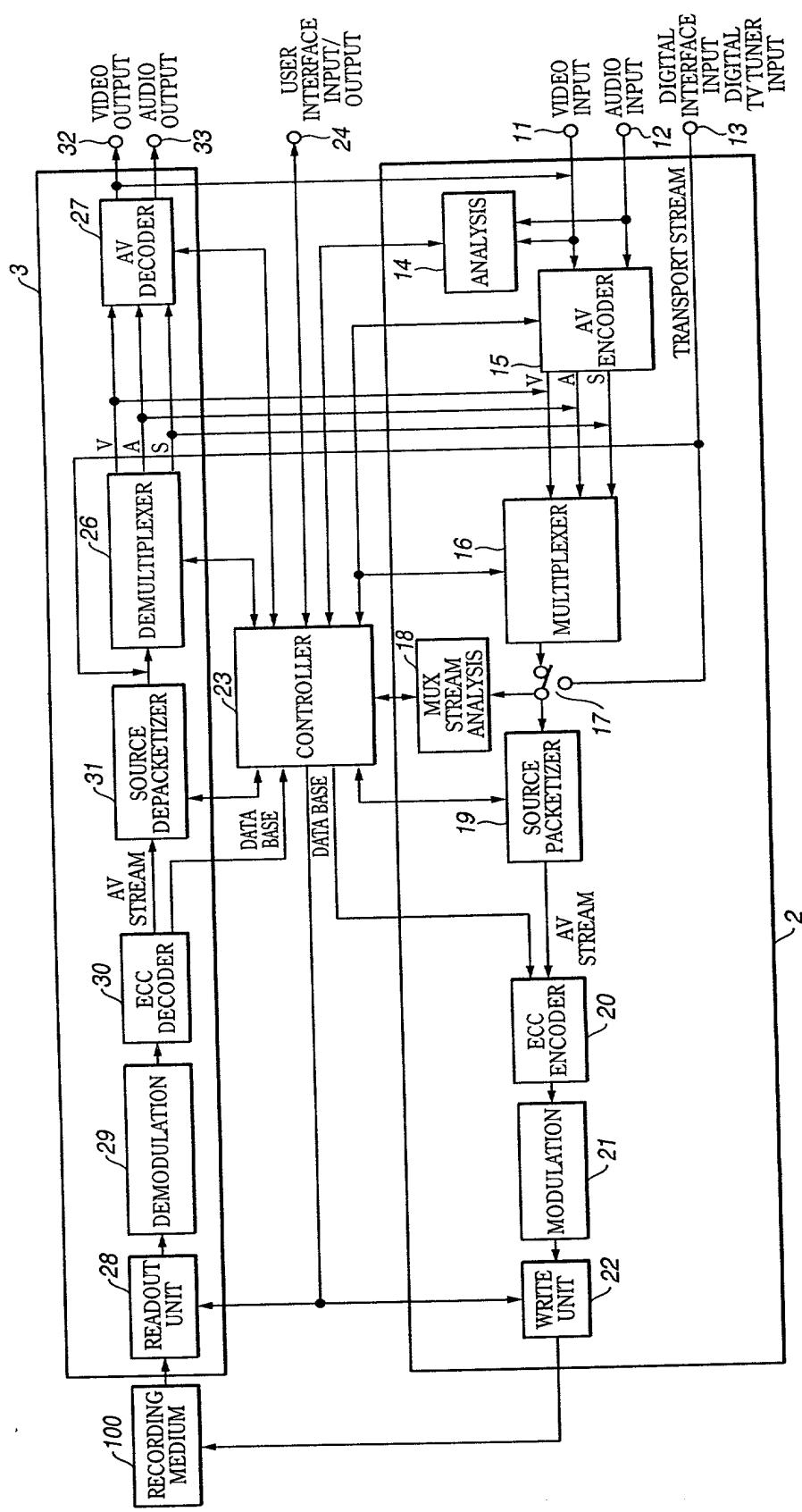
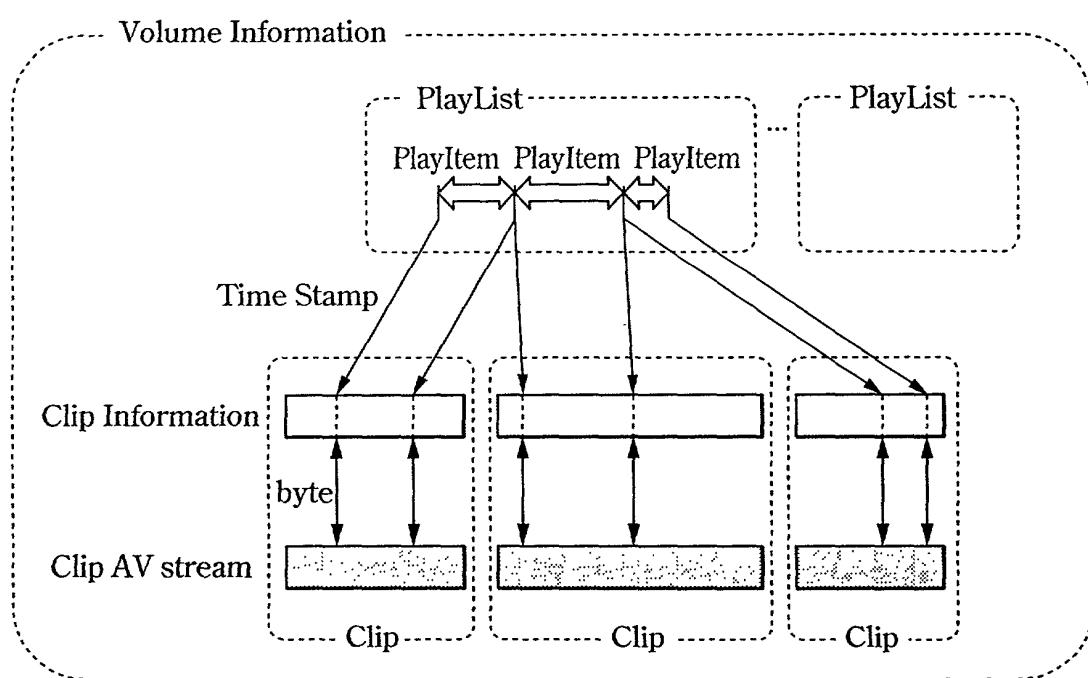


FIG. 1

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**FIG.2**

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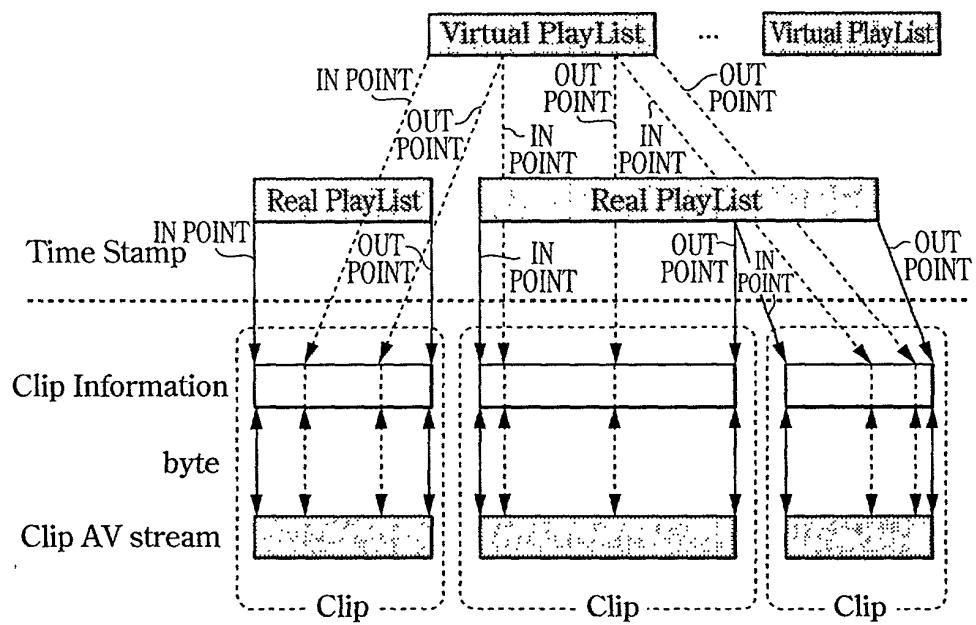
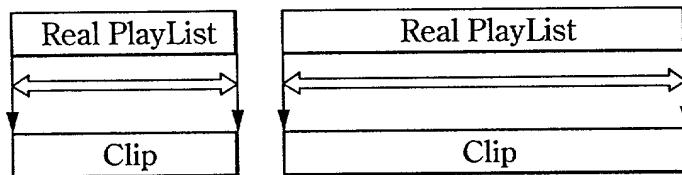
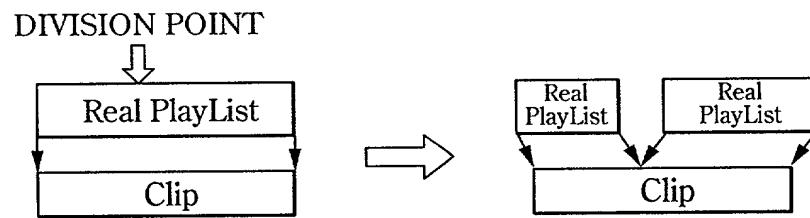
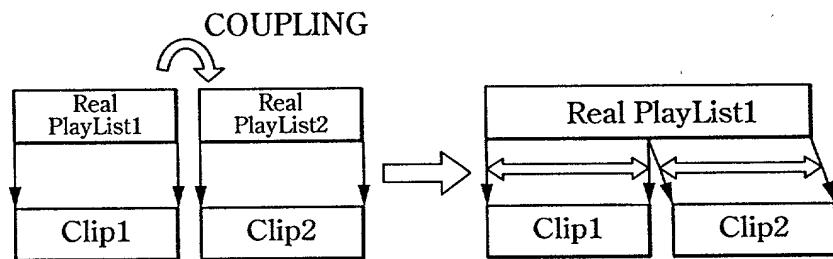
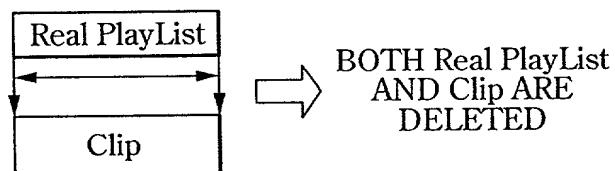
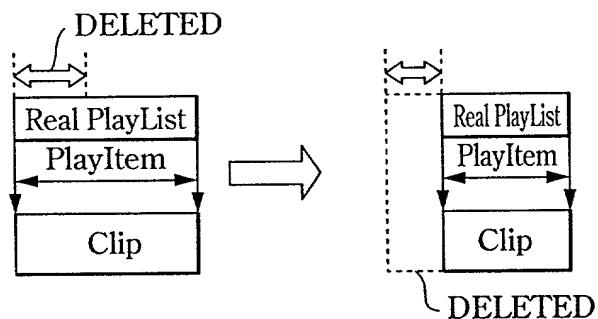
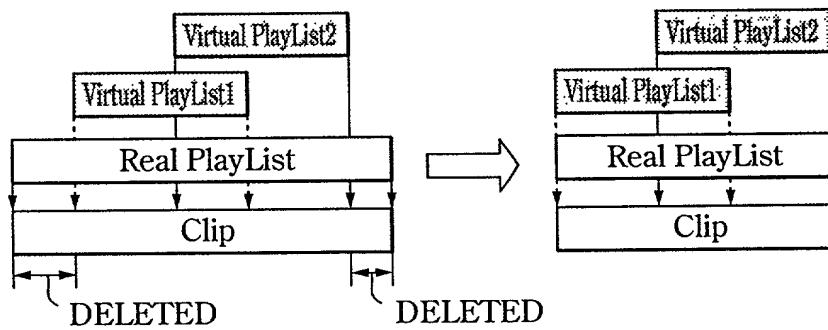


FIG.3

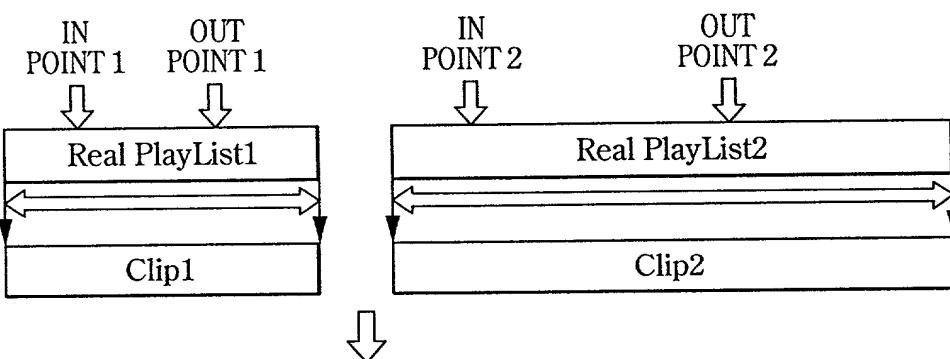
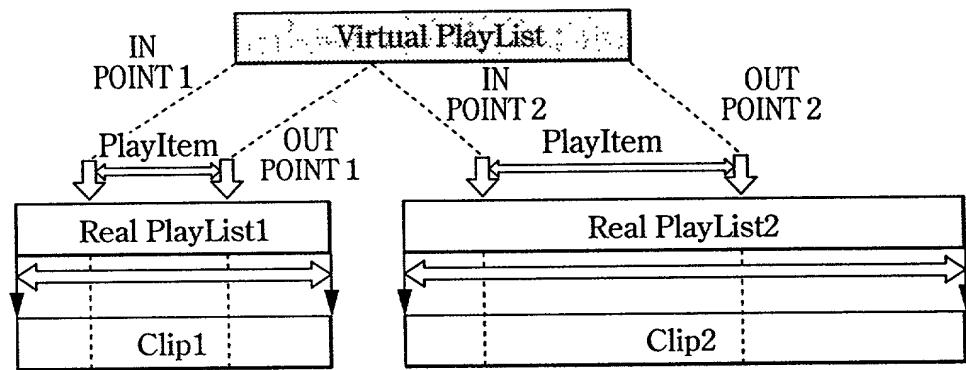
4/100

**FIG.4A****FIG.4B****FIG.4C**

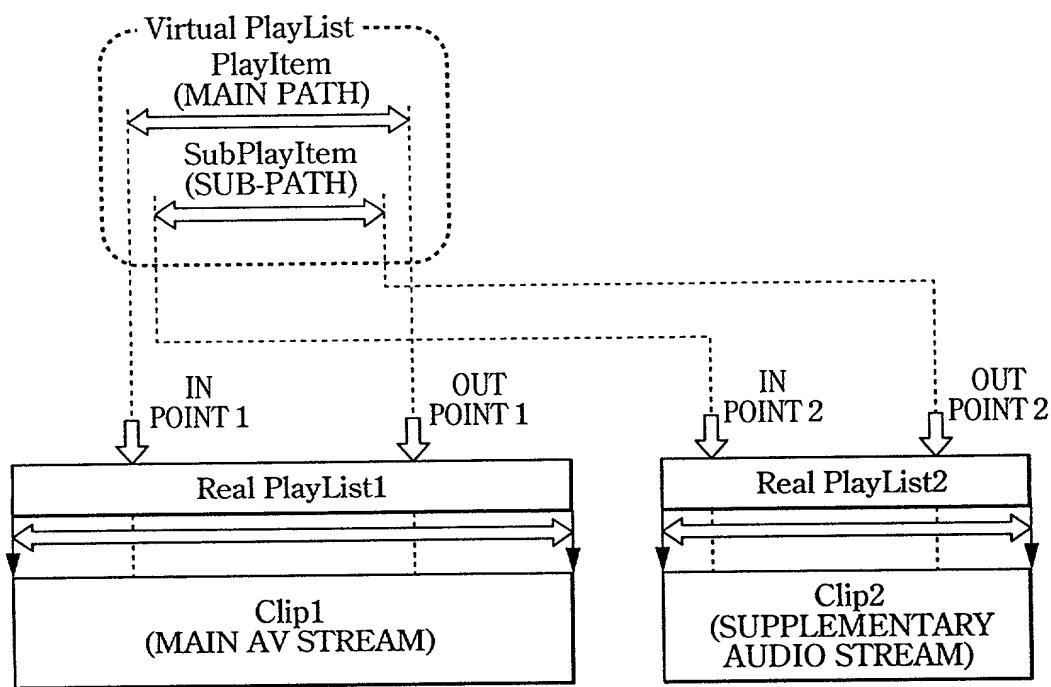
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**FIG.5A****FIG.5B****FIG.5C**

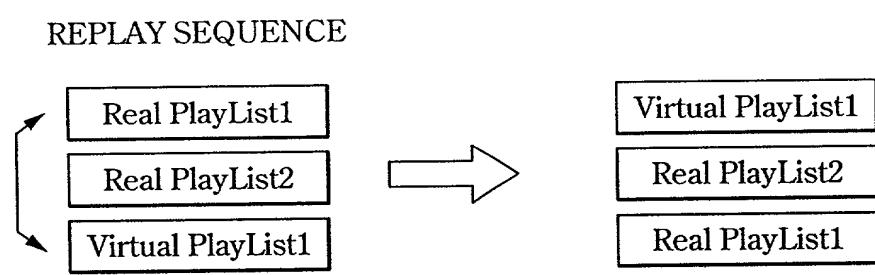
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**FIG.6A****FIG.6B**

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**FIG.7**

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**FIG.8**

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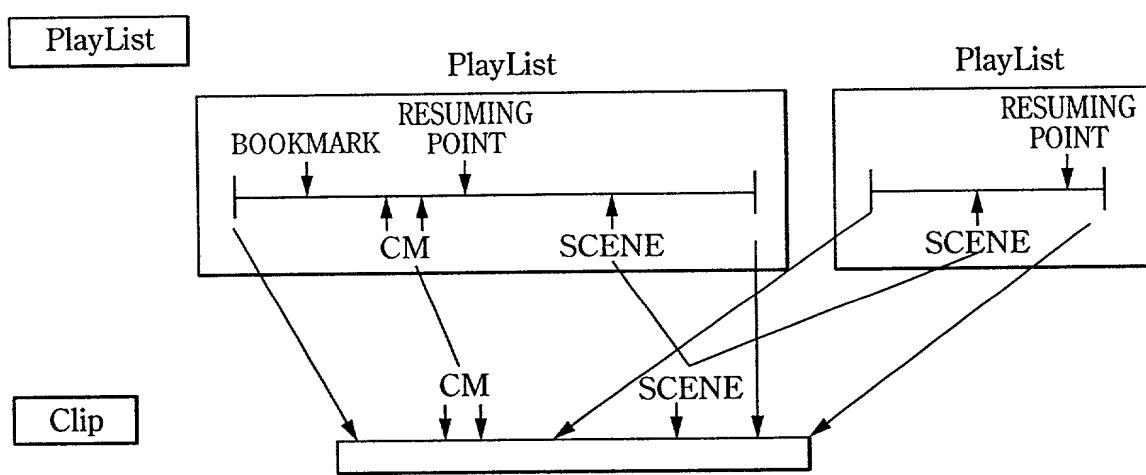
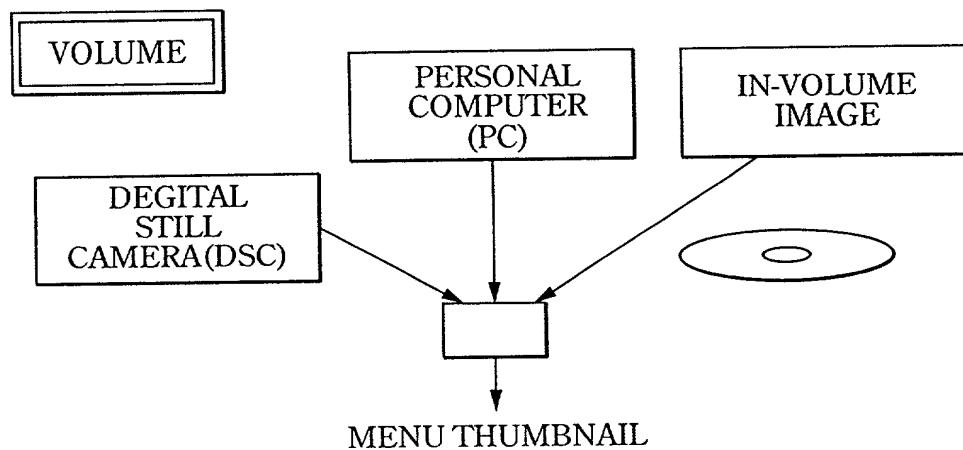
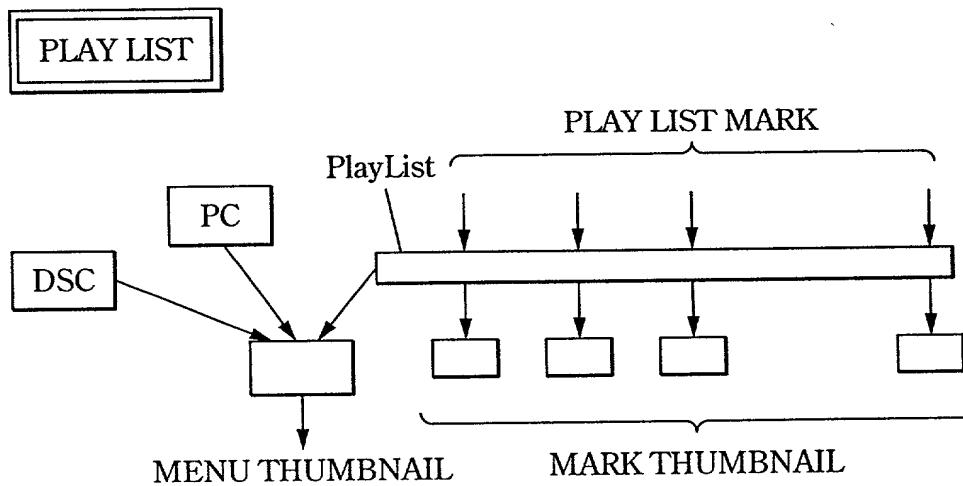
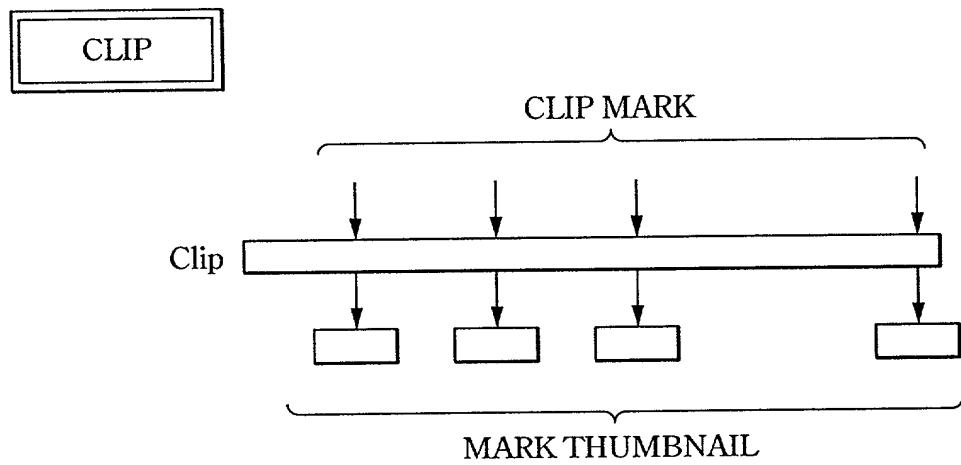
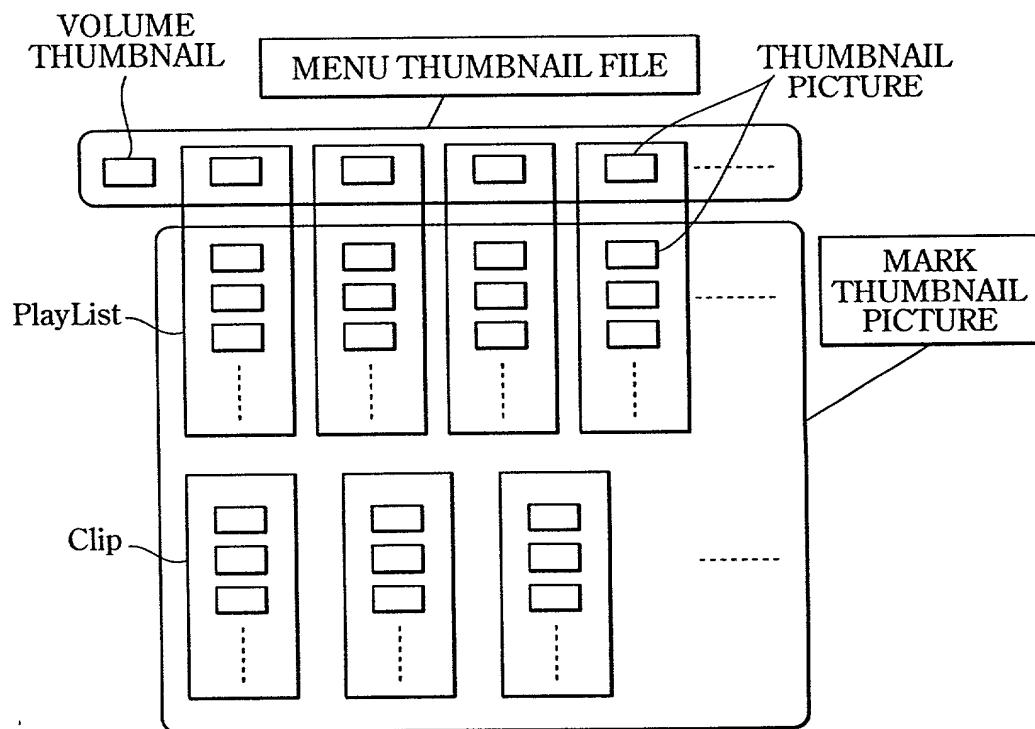


FIG.9

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**FIG.10****FIG.11**

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**FIG.12****FIG.13**

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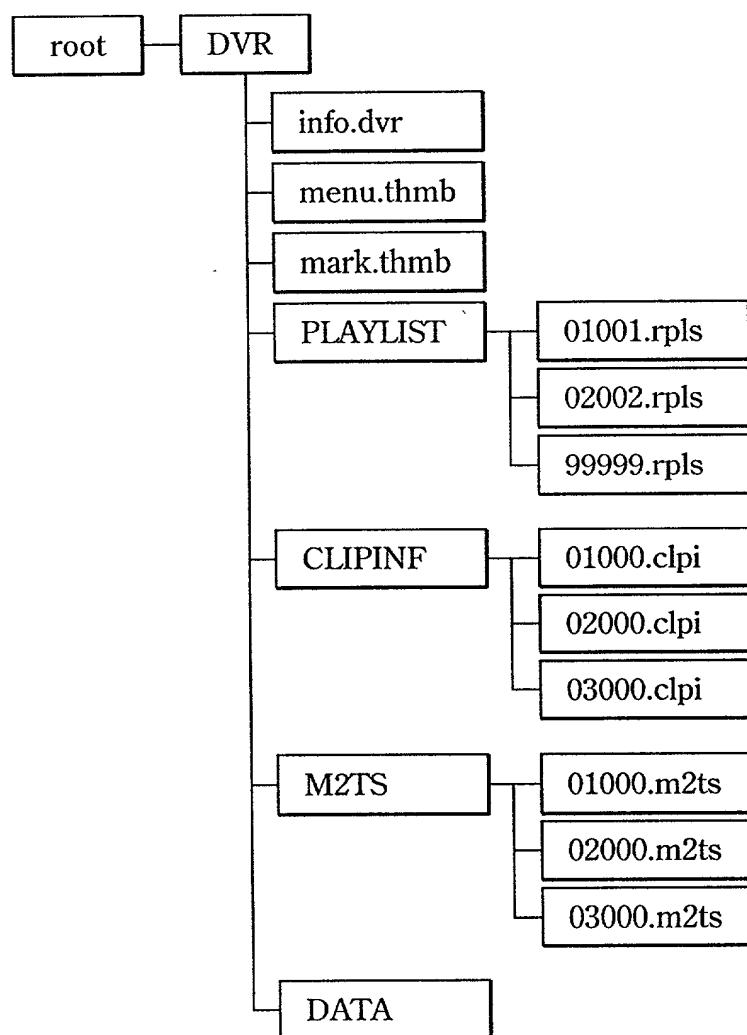


FIG.14

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
info.dvr {		
<b>TableOfPlayLists_Start_address</b>	32	uimsbf
<b>MakersPrivateData_Start_address</b>	32	uimsbf
reserved	192	bslbf
<b>DVRVolume()</b>		
for (i=0;i<N1;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>TableOfPlayLists()</b>		
for (i=0;i<N2;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>MakersPrivateData()</b>		
}		

**FIG.15**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
DVRVolume()		
version_number	8*4	bslbf
length	32	uimsbf
ResumeVolume()		
UIAppInfoVolume()		
}		

FIG.16

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
ResumeVolume(){		
reserved	15	bslbf
<u>valid_flag</u>	1	bslbf
resume_PlayList_name	8*10	bslbf
}		

FIG.17

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
UIAppInfoVolume(){		
<b>character_set</b>	8	bslbf
<b>name_length</b>	8	uimsbf
<b>Volume_name</b>	8*256	bslbf
<b>reserved</b>	15	bslbf
<b>Volume_protect_flag</b>	1	bslbf
<b>PIN</b>	8*4	bslbf
<b>ref_thumbnail_index</b>	16	uimsbf
<b>reserved_for_future_use</b>	256	bslbf
}		

FIG.18

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VALUE	CHARACTER LETTER ENCODING
0x00	Reserved
0x01	ISO/IEC 646 (ASCII)
0x02	ISO/IEC 10646-1 (Unicode)
0x03-0xff	Reserved

FIG.19

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
TableOfPlayLists{		
version_number	8*4	bslbf
length	32	uimsbf
number_of_PlayLists	16	uimsbf
for (i=0; i<number_of_PlayLists; i++){		
PlayList_file_name	8*10	bslbf
}		
}		

**FIG.20**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
TableOfPlayLists()		
<b>version_number</b>	8*4	bslbf
<b>length</b>	32	uimsbf
<b>number_of_PlayLists</b>	16	uimsbf
for (i=0; i< <i>number_of_PlayLists</i> ; i++){		
<b>PlayList_file_name</b>	8*10	bslbf
<b>UIAppInfoPlayList()</b>		
}		
}		

FIG.21

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
MakersPrivateData0{		
<b>version_number</b>	8*4	bslbf
<b>length</b>	32	uimsbf
if (length !=0){		
<b>mpd_blocks_start_address</b>	32	uimsbf
<b>number_of_maker_entries</b>	16	uimsbf
<b>mpd_block_size</b>	16	uimsbf
<b>number_of_mpd_blocks</b>	16	uimsbf
reserved	16	bslbf
for (i=0; i< <b>number_of_maker_entries</b> ; i++){		
<b>maker_ID</b>	16	uimsbf
<b>maker_model_code</b>	16	uimsbf
<b>start_mpd_block_number</b>	16	uimsbf
reserved	16	bslbf
<b>mpd_length</b>	32	uimsbf
}		
<b>stuffing_bytes</b>	8*2*L1	bslbf
for(j=0; j< <b>number_of_mpd_blocks</b> ; j++){		
<b>mpd_block</b>	<b>mpd_block_size</b> *1024*8	
}		
}		
}		

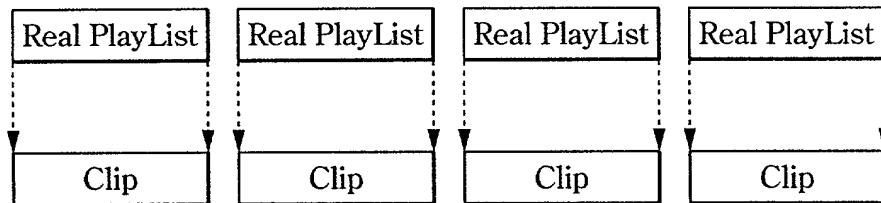
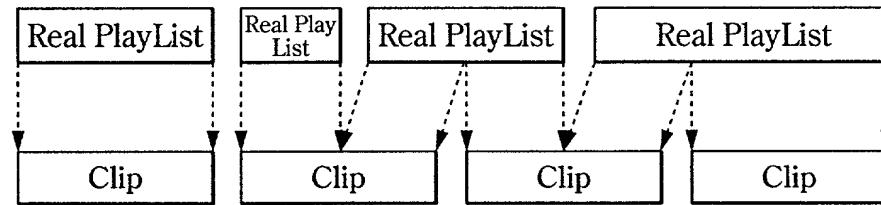
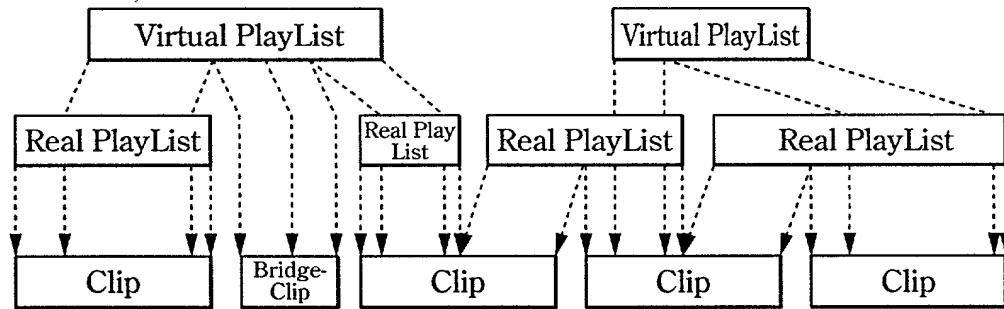
FIG.22

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
xxxxx.rpls / yyyy.vpls {		
<b>PlayListMark_Start_address</b>	32	uimsbf
<b>MakersPrivateData_Start_address</b>	32	uimsbf
reserved	192	bslbf
<b>PlayList()</b>		
for (i=0;i<N1;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>PlayListMark()</b>		
for (i=0;i<N2;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>MakersPrivateData()</b>		
}		

FIG.23

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**FIG.24A****FIG.24B****FIG.24C**

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SYNTAX		NUMBER OF BYTES	ABBREVIATION
PlayList()			
<b>version_number</b>		8*4	bslbf
<b>length</b>		32	uimsbf
<b>PlayList_type</b>		8	uimsbf
<b>CPI_type</b>		1	bslbf
reserved		7	bslbf
<b>UIAppInfoPlayList()</b>			
<b>number_of_PlayItems</b> // main path		16	uimsbf
if (<Virtual PlayList>){			
<b>number_of_SubPlayItems</b> // sub path		16	uimsbf
}else{			
reserved		16	bslbf
}			
for (PlayItem_id=0; PlayItem_id<nymber_of_PlayItems; PlayItem_id++) {			
<b>PlayItem()</b> //main path			
}			
if (<Virtual PlayList>){			
if (CPI_type==0 && PlayList_type==0){			
for (i=0; i<number_of_SubPlayItems; i++)			
<b>SubPlayItem()</b> //sub path			
}.			
}			
}			

FIG.25

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PlayList_type	MEANING
0	PLAY LIST FOR AV RECORDING ALL CLIPS REFERENCED IN THIS PLAY LIST MUST CONTAIN ONE OR MORE VIDEO STREAMS
1	PLAY LIST FOR AUDIO RECORDING ALL CLIPS REFERENCED IN THIS PLAYLIST MUST CONTAIN ONE OR MORE AUDIO STREAMS AND MUST NOT CONTAIN VIDEO STREAMS
2-255	reserved

FIG.26

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
UIAppInfoPlayList20{		
character_set	8	bslbf
name_length	8	uimsbf
PlayList_name	8*256	bslbf
reserved	8	bslbf
record_time_and_date	4*14	bslbf
reserved	8	bslbf
duration	4*6	bslbf
valid_period	4*8	bslbf
maker_id	16	uimsbf
maker_code	16	uimsbf
reserved	11	bslbf
playback_control_flag	1	bslbf
write_protect_flag	1	bslbf
is_played_flag	1	bslbf
archive	2	bslbf
ref_thumbnail_index	16	uimsbf
reserved_for_future_use	256	bslbf
}		

FIG.27

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write_protect_flag	MEANING
0b	THE PlayList CAN BE ERASED FREELY
1b	THE PlayList CONTENTS SHOULD NOT BE ERASED NOR CHANGED EXCEPT write-protect-flag

**FIG.28A**

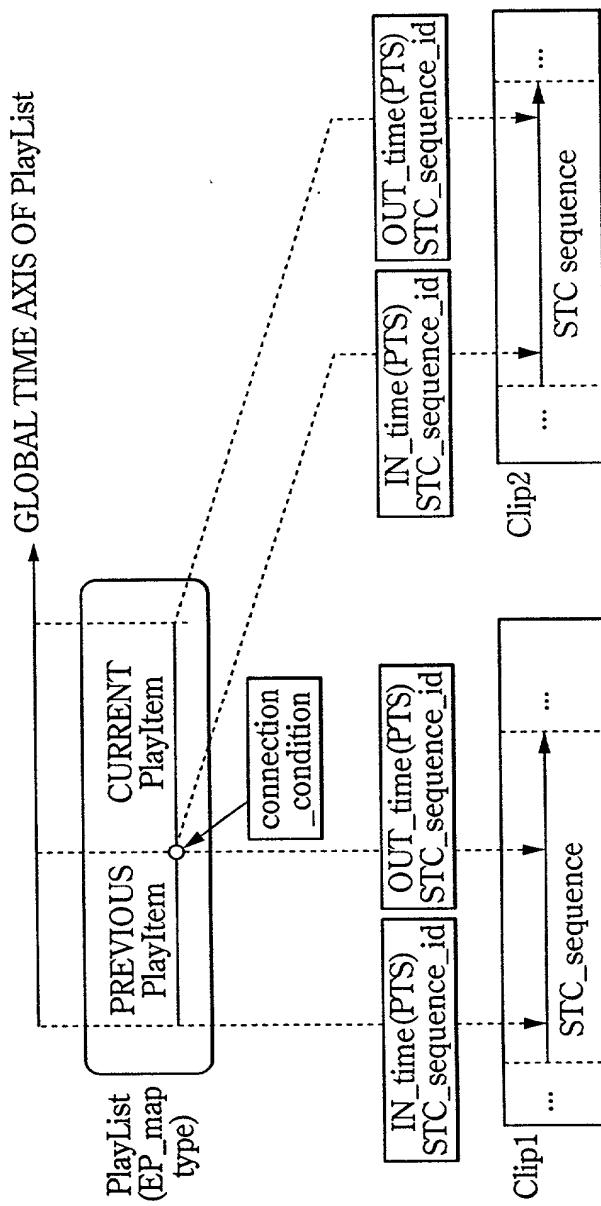
is_played_flag	MEANING
0b	THE PlayList HAS NOT BEEN REPRODUCED SINCE ITS RECORDING
1b	THE PlayList WAS ONCE REPRODUCED SINCE ITS RECORDING

**FIG.28B**

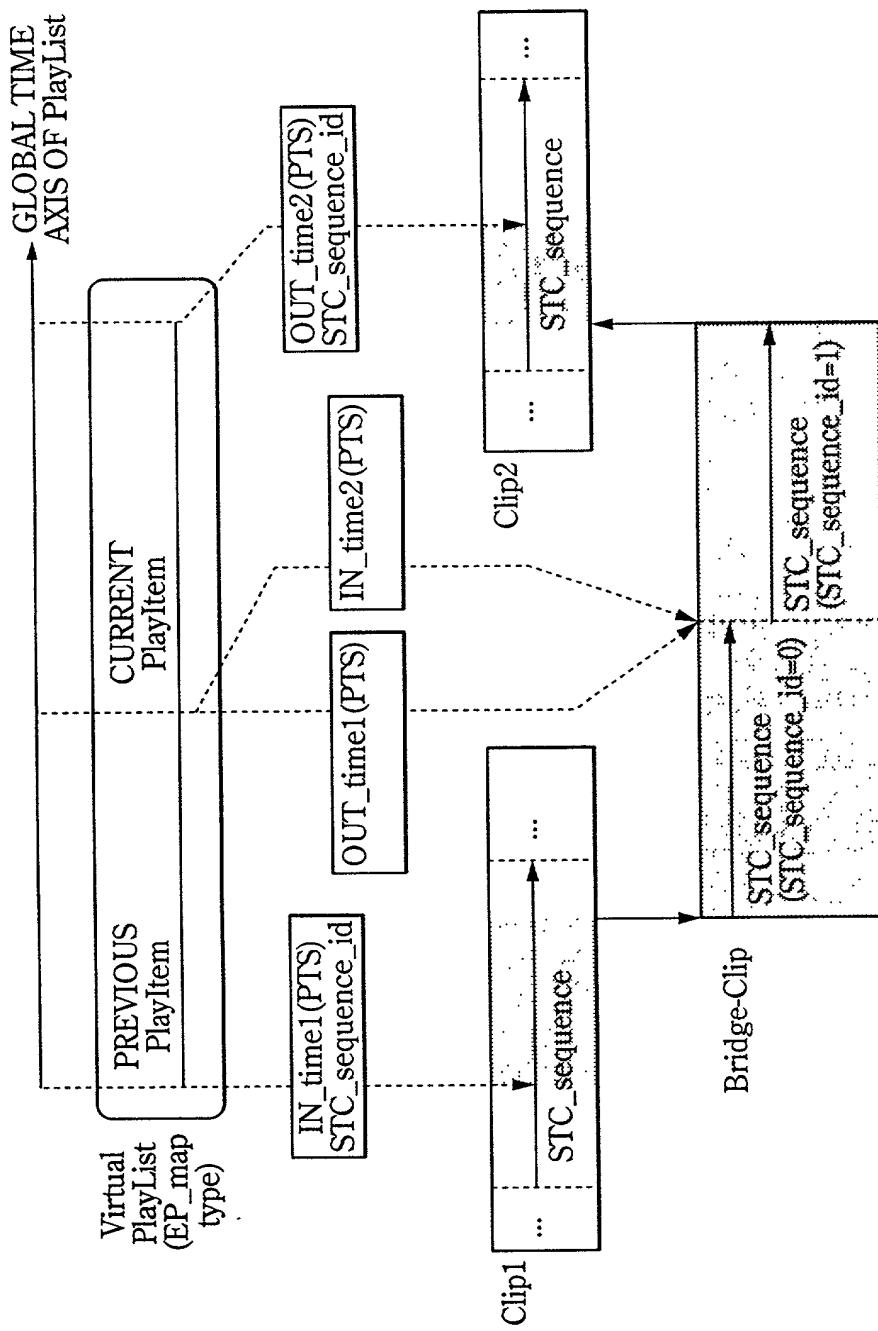
archive	MEANING
00b	NO MEANING DEFINED
01b	ORIGINAL
10b	COPY
11b	reserved

**FIG.28C**

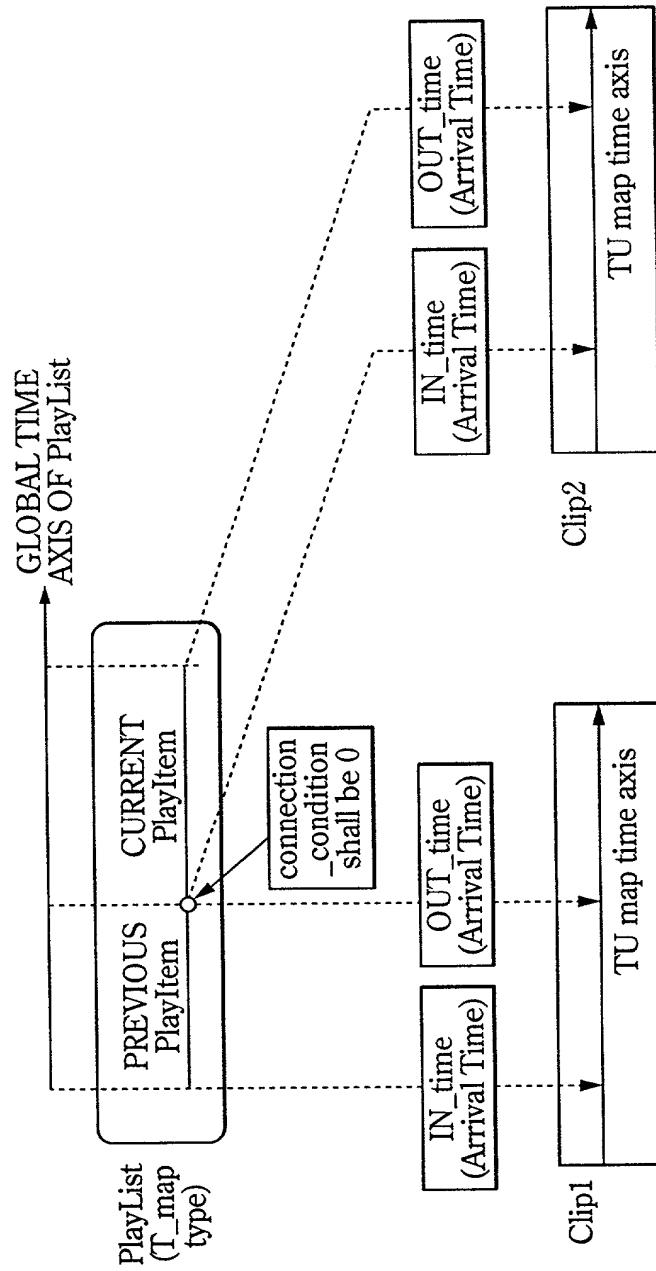
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**FIG.29**

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**FIG.30**

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**FIG.31**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
PlayItem(){		
<b>Clip_information_file_name</b>	8*10	bslbf
reserved	24	bslbf
<b>STC_sequence_id</b>	8	uimsbf
<b>IN_time</b>	32	uimsbf
<b>OUT_time</b>	32	uimsbf
reserved	14	bslbf
<b>connection_condition</b>	2	bslbf
if (<Virtual PlayList>){		
if ( <i>connection_condition</i> =='10') {		
<b>BridgeSequenceInfo()</b>		
}		
}		
}		

FIG.32

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CPI_type in the PlayList0	SEMANTICS OF IN_time
EP_map type	IN_time MUST INDICATE UPPER 32 BITS OF 33 BIT LENGTH CORRESPONDING TO FIRST PRESENTATION UNIT IN PlayItem
TU_map type	IN_time MUST BE TIME ON TU_map_time_axis, AND MUST BE ROUNDED TO time_unit PRECISION. IN-time IS CALCULATED BY FOLLOWING EQUATION: $\text{IN\_time} = \text{TU\_start\_time} \% 2^{32}$

FIG.33

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CPI_type in the PlayList0	SEMANTICS OF OUT_time
EP_map type	<p>OUT_time MUST INDICATE UPPER 32 BITS OF THE VALUE OF Presentation_end_TS CALCULATED BY FOLLOWING EQUATION:</p> $\text{Presentation\_end\_TS} = \text{PTS\_out} + \text{AU\_duration}$ <p>WHERE PTS_out IS 33-BIT LONG PTS CORRESPONDING TO LAST PRESENTATION UNIT IN PlayItem. AU_duration IS 90 kHz-DISPLAY TIME OF LAST PRESENTATION UNIT.</p>
TU_map type	<p>OUT_time MUST BE TIME ON TU_map_time_axis AND BE ROUNDED TO time_unit PRECISION. OUT_time IS CALCULATED BY FOLLOWING EQUATION:</p> $\text{OUT\_time} = \text{TU\_start\_time \%}2^{32}$

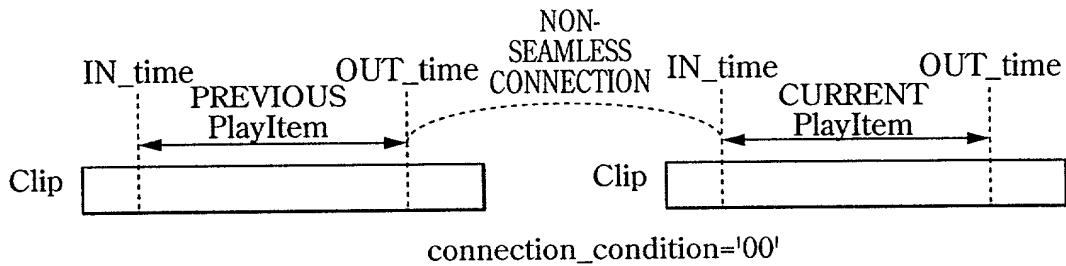
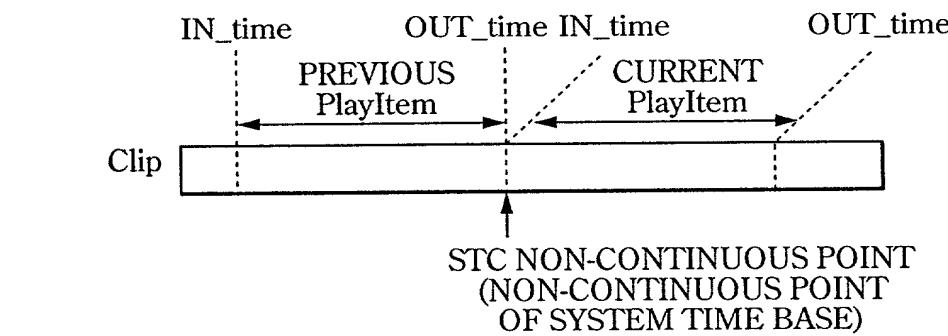
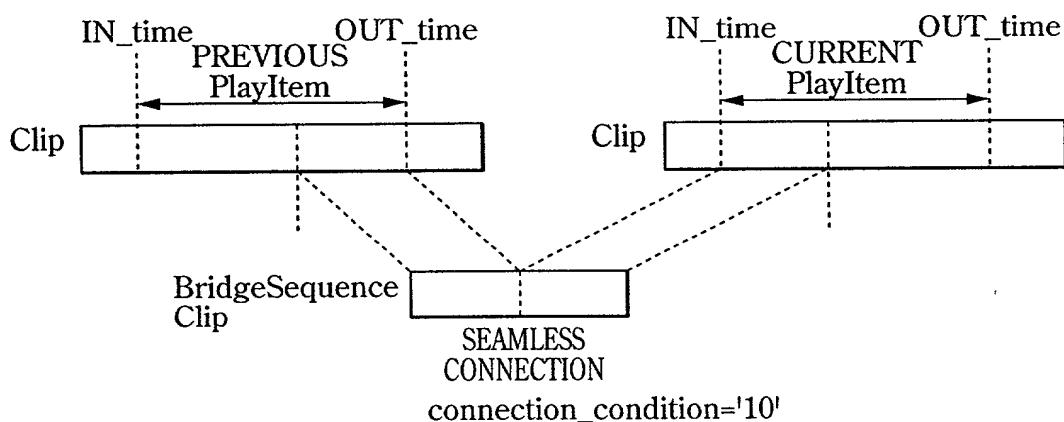
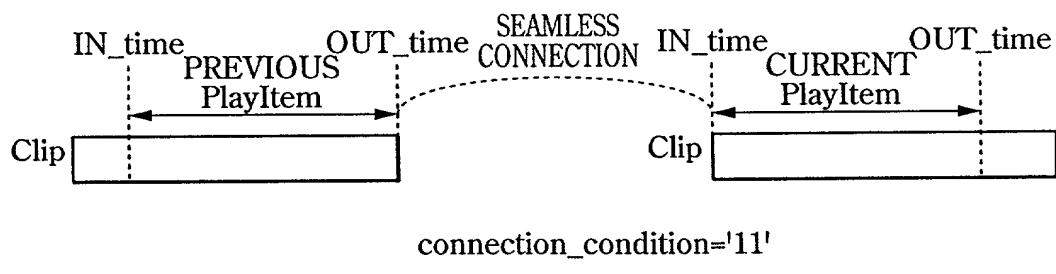
FIG.34

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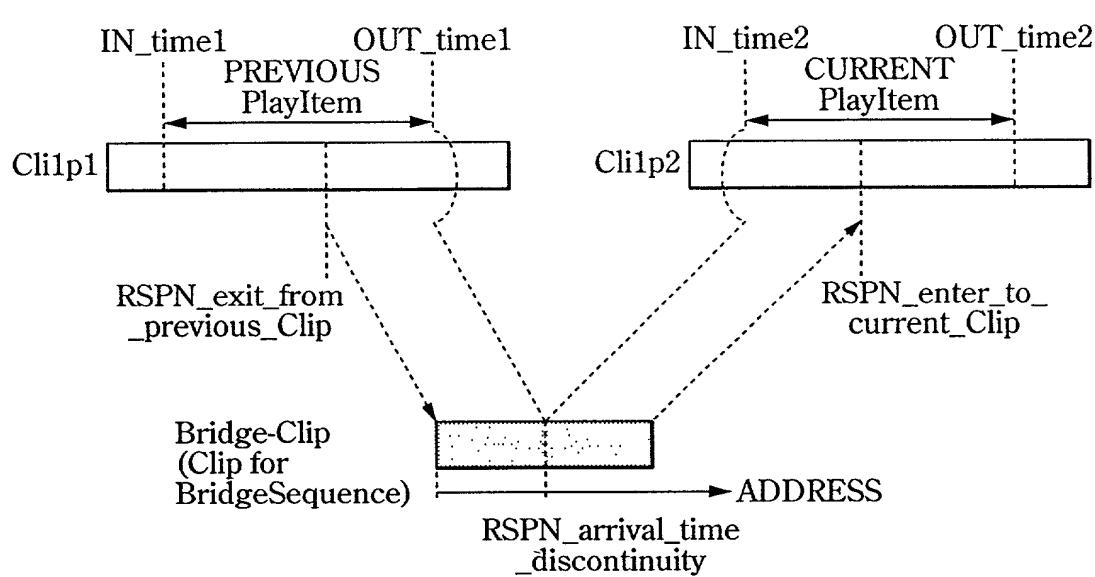
connection_condition	MEANING
00	<ul style="list-style-type: none"> <li>• CONNECTION OF PREVIOUS PlayItem TO CURRENT PlayItem IS NOT SURE AS TO SEAMLESS REPLAY.</li> <li>• IF CPI_type OF PlayList IS TU_map type, THIS VALUE MUST BE SET IN connection_condition.</li> </ul>
01	<ul style="list-style-type: none"> <li>• THIS STATE IS ALLOWED ONLY WHEN CPI_type OF PlayList IS EP_map type.</li> <li>• PREVIOUS PlayItem AND CURRENT PlayItem INDICATE DIVISION BECAUSE OF NON-CONTINUOUS POINT OF SYSTEM TIMEBASE (STC BASE).</li> </ul>
10	<ul style="list-style-type: none"> <li>• THIS STATE IS ALLOWED ONLY WHEN CPI_type OF PlayList IS EP_map type.</li> <li>• THIS STATE IS ALLOWED ONLY FOR Virtual PlayList.</li> <li>• CONNECTION OF PREVIOUS PlayItem TO CURRENT PlayItem IS SURE AS TO SEAMLESS REPLAY.</li> <li>• PREVIOUS PlayItem IS CONNECTED TO CURRENT PlayItem USING BridgeSequence. DVR MPEG-2 TRANSPORT STREAM MUST OBEY DVR-STD AS LATER DESCRIBED.</li> </ul>
11	<ul style="list-style-type: none"> <li>• THIS STATE IS ALLOWED ONLY WHEN CPI_type OF PlayList IS EP_map type.</li> <li>• CONNECTION OF PREVIOUS PlayItem TO CURRENT Play Item IS SURE AS TO SEAMLESS REPLAY.</li> <li>• PREVIOUS PlayItem IS CONNECTED TO CURRENT PlayItem WITHOUT USING BridgeSequence. DVR MPEG-2 TRANSPORT STREAM MUST OBEY DVR-STD AS LATER DESCRIBED.</li> </ul>

**FIG.35**

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**FIG.36A****FIG.36B****FIG.36C****FIG.36D**

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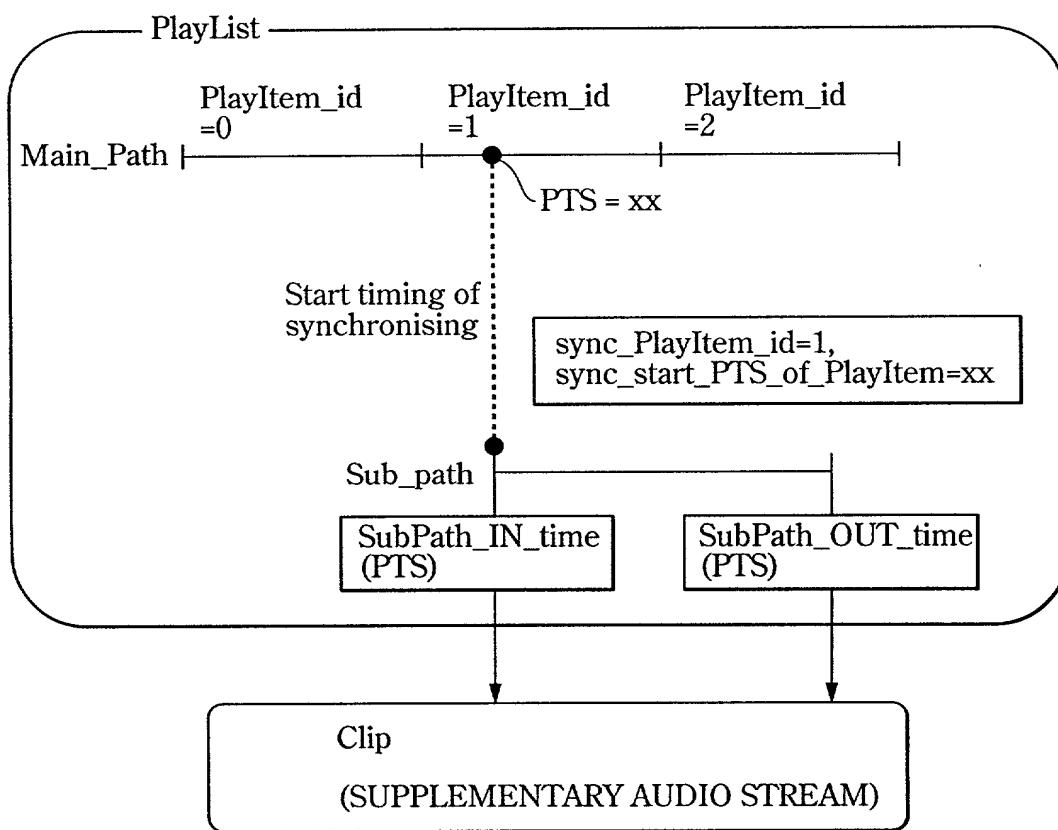
**FIG.37**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
BridgeSequenceInfo 0 {		
<b>Bridge_Clip_information_file_name</b>	8*10	bslbf
<b>RSPN_exit_from_previous_Clip</b>	32	uimsbf
<b>RSPN_enter_to_current_Clip</b>	32	uimsbf
}		

FIG.38

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**FIG.39**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
SubPlayItem0{		
Clip_Information_file_name	8*10	bslbf
SubPath_type	8	bslbf
sync_PlayItem_id	8	uimsbf
sync_start PTS_of_PlayItem	32	uimsbf
SubPath_IN_time	32	uimsbf
SubPath_OUT_time	32	uimsbf
}		

FIG.40

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SubPath_type	MEANING
0x00	Auxiliary audio steam path
0x01-0xff	reserved

**FIG.41**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
PlayListMark()		
<b>version_number</b>	8*4	bslbf
<b>length</b>	32	uimsbf
<b>number_of_PlayList_marks</b>	16	uimsbf
for (i=0;i< <i>number_of_PlayList_marks</i> ;i++){		
<b>reserved</b>	8	bslbf
<b>mark_type</b>	8	bslbf
<b>mark_time_stamp</b>	32	uimsbf
<b>PlayItem_id</b>	8	uimsbf
<b>reserved</b>	24	uimsbf
<b>character_set</b>	8	bslbf
<b>name_length</b>	8	uimsbf
<b>mark_name</b>	8*256	bslbf
<b>ref_thumbnail_index</b>	16	uimsbf
}		
}		

**FIG.42**

Mark_type	MEANING	COMMENT
0x00	resume-mark	REPLAY RESUME POINT. THE NUMBER OF REPLAY RESURE POINTS DEFINED IN PlayListMark() MUST BE 0 OR 1.
0x01	book-mark	REPLAY ENTRY POINT OF PlayList. THIS MARK CAN BE SET BY USER AND USED AS MARK SPECIFYING START POINT OF FAVORITE SCENE.
0x02	skip-mark	SKIP MARK POINT. PLAYER SKIPS PROGRAM FROM THIS POINT TO THE END OF PROGRAM. THE NUMBER OF SKIP MARK POINTS DEFINED IN PlayListMark() MUST BE 0 OR 1.
0x03-0x8F	reserved	
0x90-0xFF	reserved	Reserved for ClipMark()

**FIG.43**

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CPI_type in the PlayList()	SEMANTICS OF mark_time_stamp
EP_map type	mark_time_stamp MUST INDICATE UPPER 32 BITS OF 33 BIT LENGTH PTS CORRESPONDING TO PRESENTATION UNIT REFERENCED BY MARK.
TU_map type	mark_time_stamp MUST BE TIME ON TU_map_time_axis AND MUST BE ROUNDED TO time_unit PRECISION. mark_time_stamp IS CALCULATED BY FOLLOWING EQUATION: $\text{mark\_time\_stamp} = \text{TU\_start\_time \%}2^{32}$

FIG.44

SYNTAX	NUMBER OF BYTES	ABBREVIATION
zzzzz.clpi {		
<b>STC_Info_Start_address</b>	32	uimsbf
<b>ProgramInfo_Start_address</b>	32	uimsbf
<b>CPI_Start_address</b>	32	uimsbf
<b>ClipMark_Start_address</b>	32	uimsbf
<b>MakersPrivateData_Start_address</b>	32	uimsbf
reserved	96	bslbf
<b>ClipInfo()</b>		
for (i=0;i<N1;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>STC_Info()</b>		
for (i=0;i<N2;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>ProgramInfo()</b>		
for (i=0;i<N3;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>CPI()</b>		
for (i=0;i<N4;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>ClipMark()</b>		
for (i=0;i<N5;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>MakersPrivateData()</b>		
}		

FIG.45

SYNTAX	NUMBER OF BYTES	ABBREVIATION
ClipInfo()		
version_number	8*4	bslbf
length	32	uimsbf
Clip_stream_type	8	bslbf
offset_SPN	32	uimsbf
TS_recording_rate	24	uimsbf
reserved	8	bslbf
record_time_and_date	4*14	bslbf
reserved	8	bslbf
duration	4*6	bslbf
reserved	7	bslbf
time_controlled_flag	1	bslbf
TS_average_rate	24	uimsbf
if(Clip_stream_type==1) // Bridge-Clip AV stream		
RSPN_arrival_time_discontinuity	32	uimsbf
else		
reserved	32	bslbf
reserved_for_system_use	144	bslbf
reserved	11	bslbf
is_format_identifier_valid	1	bslbf
is_original_network_ID_valid	1	bslbf
is_transport_stream_ID_valid	1	bslbf
is_service_ID_valid	1	bslbf
is_country_code_valid	1	bslbf
format_identifier	32	bslbf
original_network_ID	16	uimsbf
transport_stream_ID	16	uimsbf
service_ID	16	uimsbf
country_code	24	bslbf
stream_format_name	16*8	bslbf
reserved_for_fortune_use	256	bslbf
}		

FIG.46

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Clip_stream_type	MEANING
0	Clip AV STREAM
1	Bridge-Clip AV STREAM
2-255	Reserved

**FIG.47**

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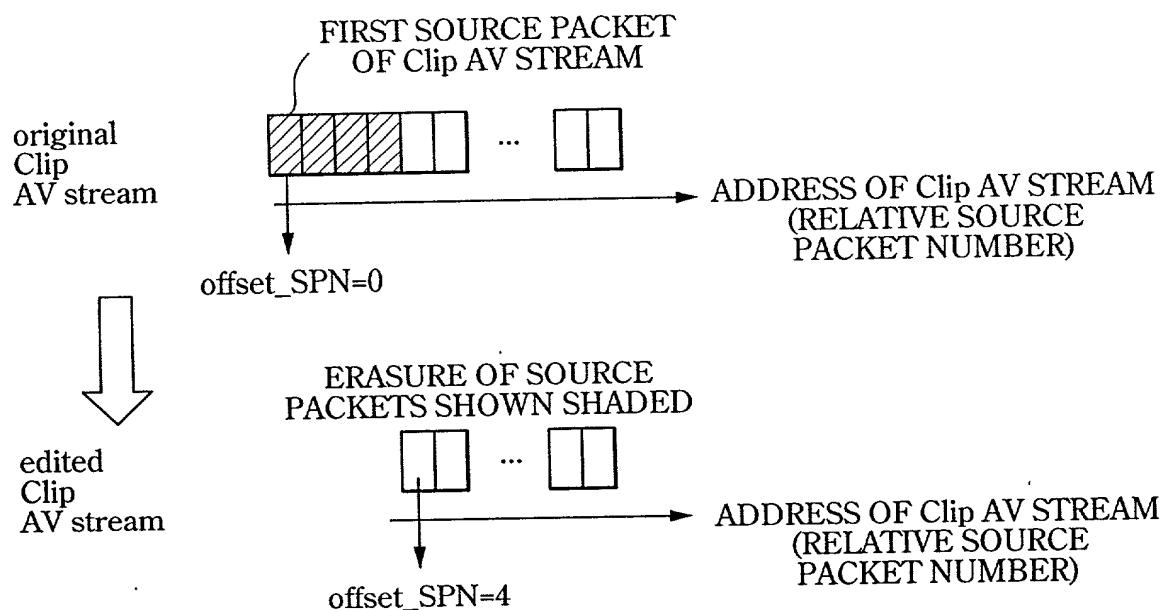
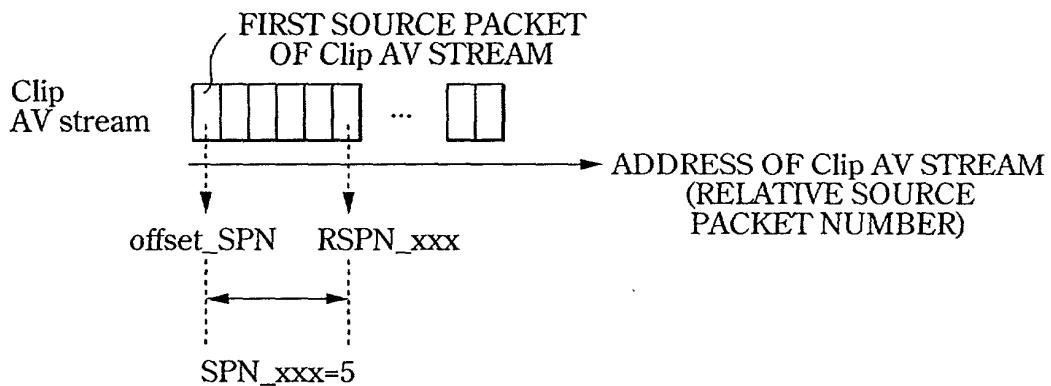
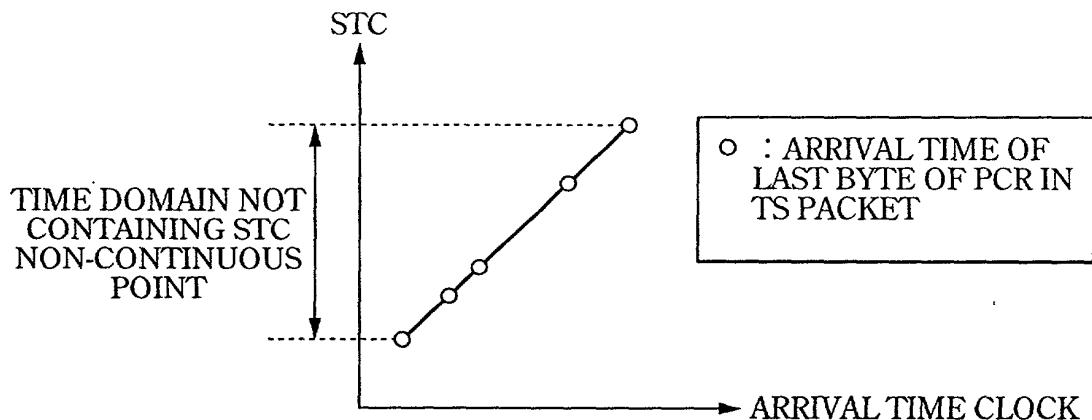
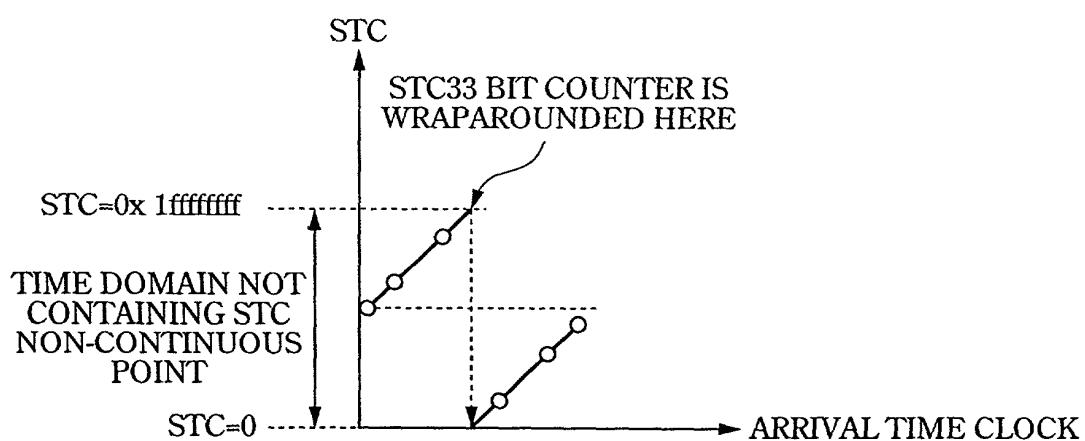
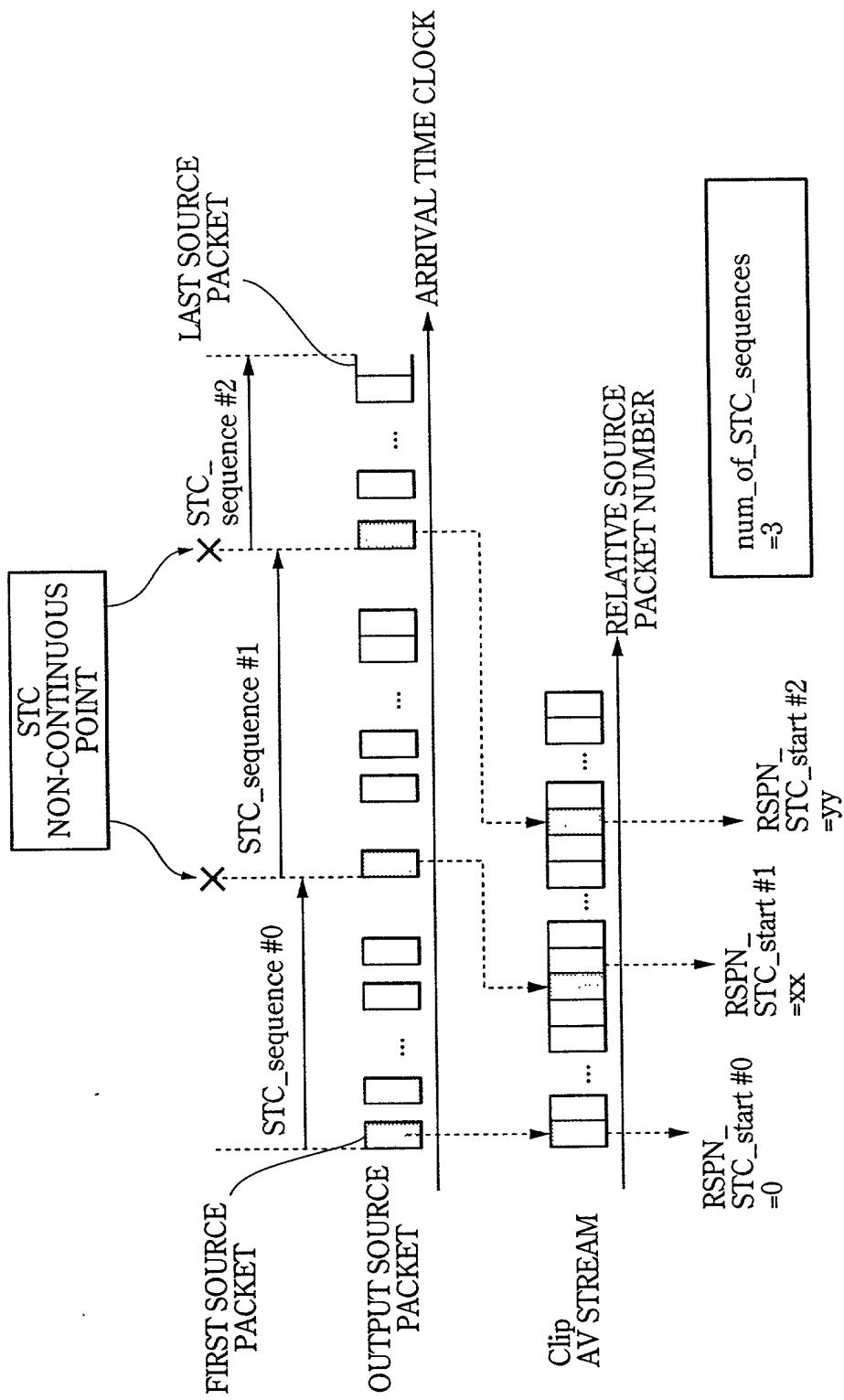


FIG.48

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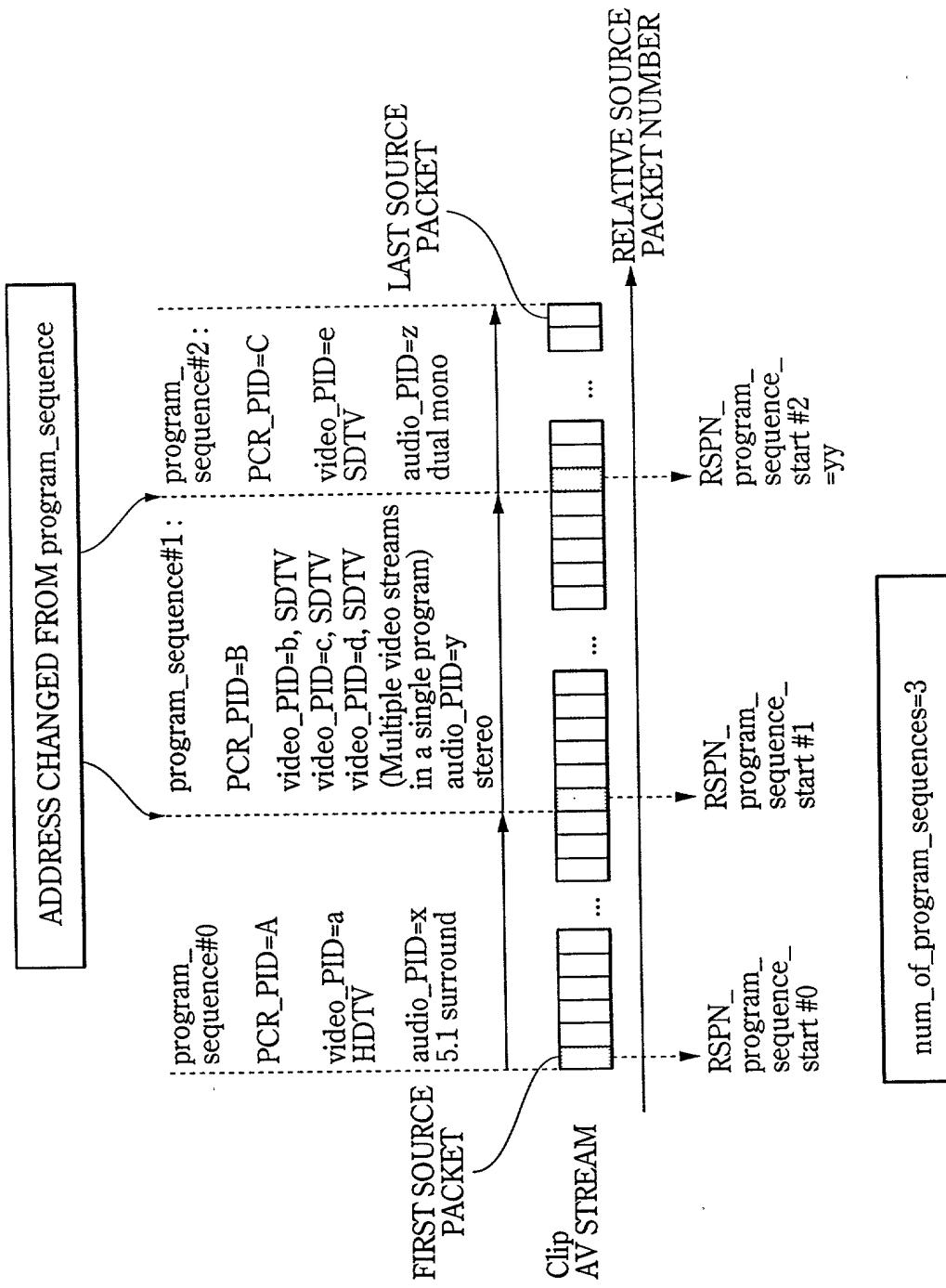
**FIG.49****FIG.50A****FIG.50B**

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**FIG.51**

SYNTAX	NUMBER OF BYTES	ABBREVIATION
STC_Info{		
version_number	8*4	bslbf
length	32	uimsbf
if (length !=0){		
reserved	8	bslbf
num_of_STC_sequences	8	uimsbf
for (STC_sequence_id=0; STC_sequence_id<num_of_STC_sequences; STC_sequence_id++) {		
resereved	32	bslbf
RSPN_STC_start	32	uimsbf
}		
}		
}		

FIG.52

**FIG.53**

SYNTAX	NUMBER OF BYTES	ABBREVIATION
ProgramInfo()		
<b>version_number</b>	8*4	bslbf
<b>length</b>	32	uimsbf
if (length !=0){		
reserved	8	bslbf
<b>number_of_program_sequences</b>	8	uimsbf
for (i=0;i<number_of_program_sequences;i++){		
<b>RSPN_program_sequence_start</b>	32	uimsbf
reserved	48	bslbf
<b>PCR_PID</b>	16	bslbf
<b>number_of_videos</b>	8	uimsbf
<b>number_of_audios</b>	8	uimsbf
for (k=0;k<number_of_videos;k++){		
<b>video_stream_PID</b>	16	bslbf
<b>VideoCodingInfo()</b>		
}		
for (k=0;k<number_of_audios;k++){		
<b>audio_stream_PID</b>	16	bslbf
<b>AudioCodingInfo()</b>		
}		
}		
}		
}		

FIG.54

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
VideoCodingInfo()		
video_format	8	uimsbf
frame_rate	8	uimsbf
display_aspect_ratio	8	uimsbf
reserved	8	bslbf
}		

FIG.55

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video_format	MEANING
0	480i
1	576i
2	480p(including 640×480p format)
3	1080i
4	720p
5	1080p
6-254	reserved
255	No information

**FIG.56**

frame_rate	MEANING
0	forbidden
1	24 000/1001 (23.976...)
2	24
3	25
4	30 000/1001 (29.97..)
5	30
6	50
7	60 000/1001 (59.94..)
8	60
9-254	reserved
255	No information

**FIG.57**

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display_aspect_ratio	MEANING
0	forbidden
1	reserved
2	4:3 display aspect ratio
3	16:9 display aspect ration
4-254	reserved
255	No information

FIG.58

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
AudioCodingInfo()		
audio_format	8	uimsbf
audio_component_type	8	uimsbf
sampling_frequency	8	uimsbf
reserved	8	bslbf
}		

FIG.59

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audio_coding	MEANING
0	MPEG-1 audio layer I or II
1	Dolby AC-3 audio
2	MPEG-2 AAC
3	MPEG-2 multi-channel audio, backward compatible to MPEG-1
4	SESF LPCM audio
5-254	reserved
255	No information

**FIG.60**

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audio_component_type	MEANING
0	single mono channel
1	dual mono channel
2	stereo (2-channel)
3	multi-lingual, multi-channel
4	surround sound
5	audio description for the visually impaired
6	audio for the hard of hearing
7-254	reserved
255	No information

**FIG.61**

sampling_frequency	MEANING
0	48 kHz
1	44.1 kHz
2	32 kHz
3-254	reserved
255	No information

**FIG.62**

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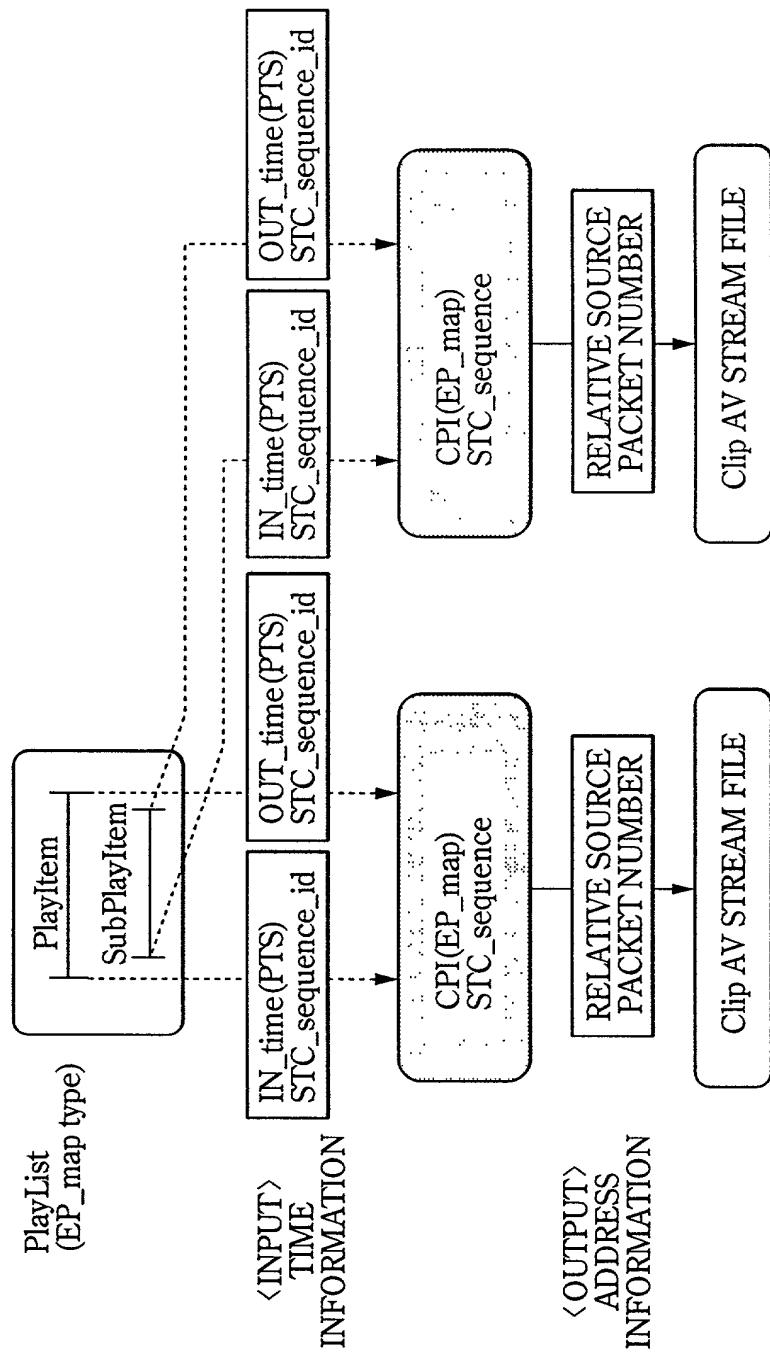
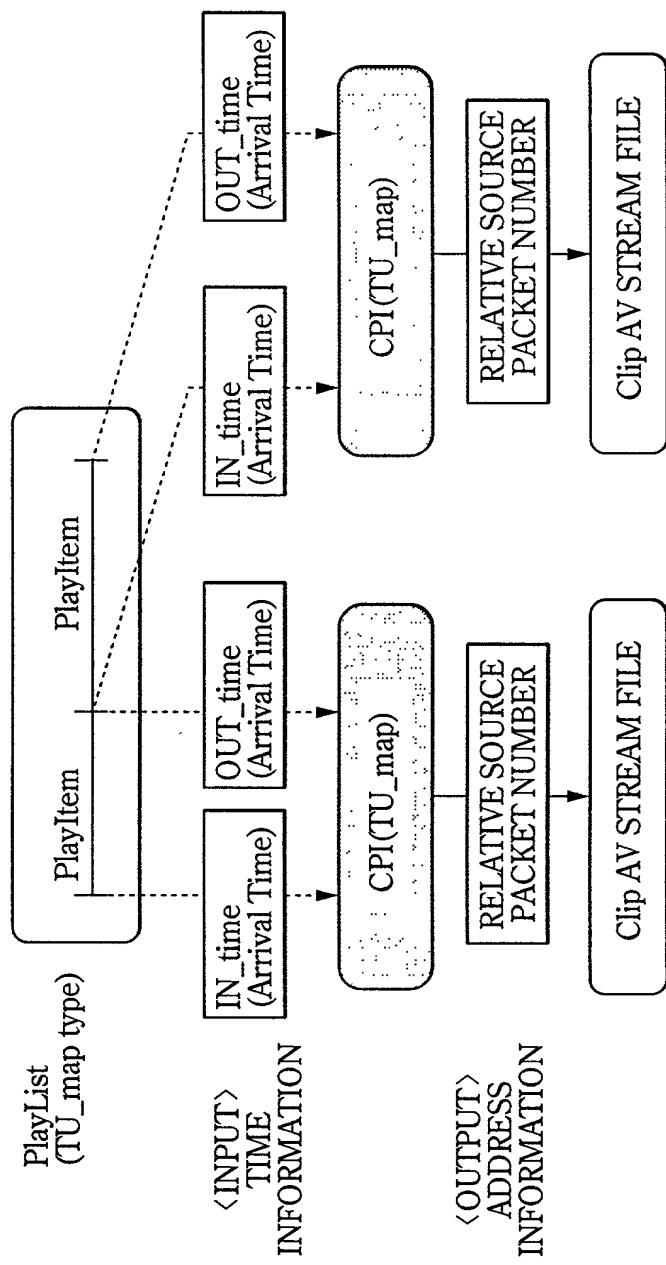


FIG.63

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**FIG.64**

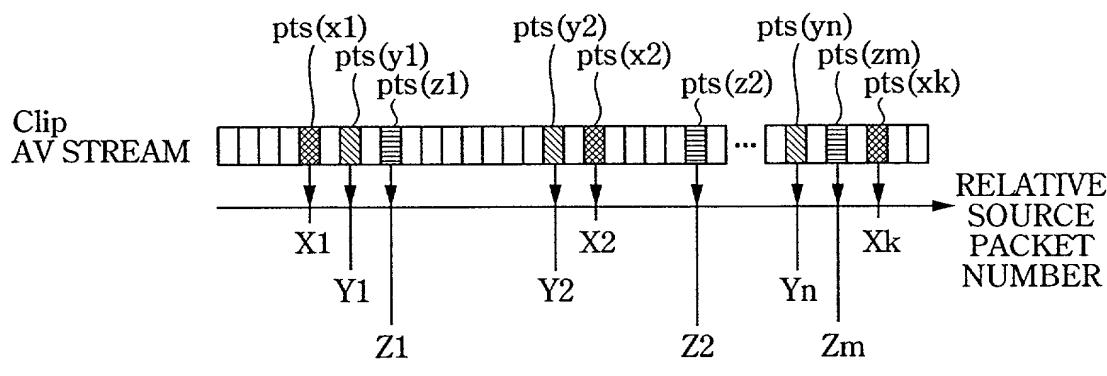
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SYNTAX	NUMBER OF BYTES	ABBREVIATION
CPI{		
<b>version_number</b>	8*4	bslbf
<b>length</b>	32	uimsbf
<b>reserved</b>	15	bslbf
<b>CPI_type</b>	1	bslbf
if (CPI_type==0)		
<b>EP_map()</b>		
else		
<b>TU_map()</b>		
}		

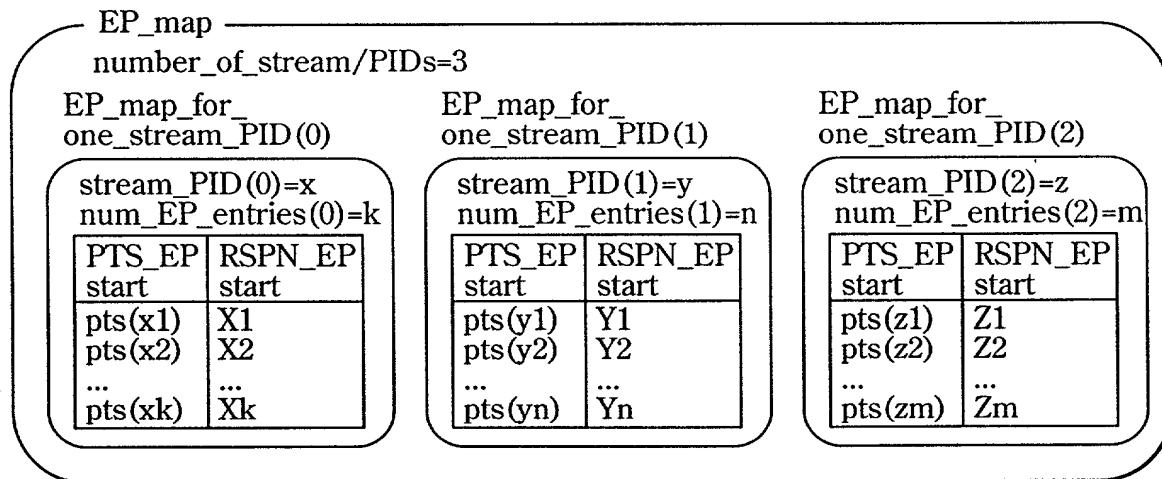
FIG.65

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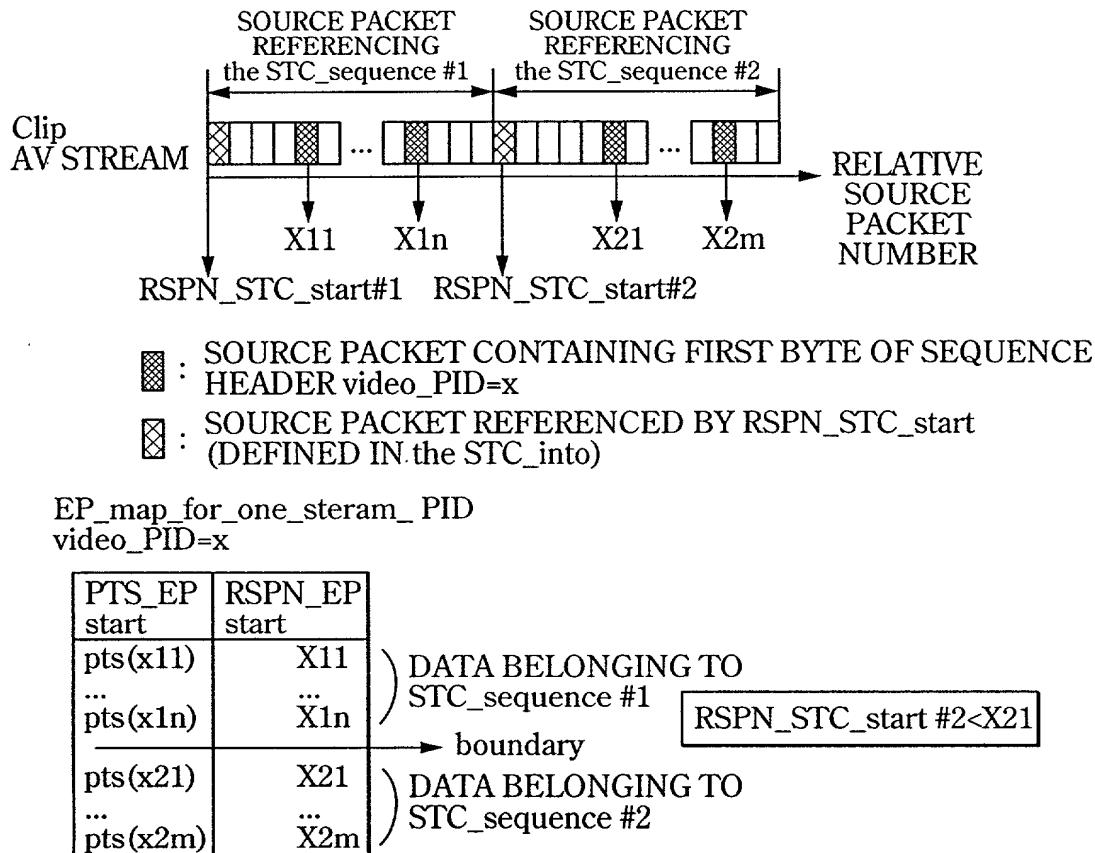
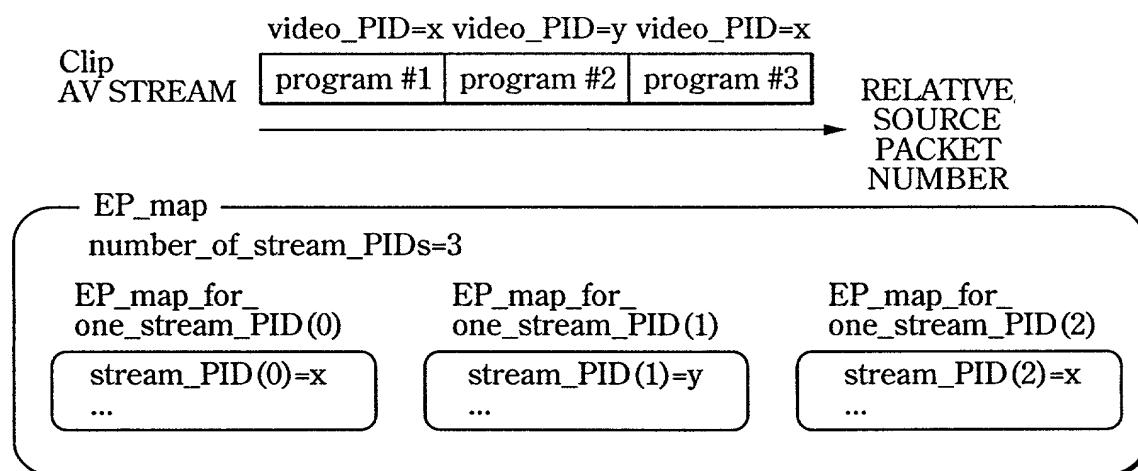
CPI_type	MEANING
0	EP map type
1	TU map type

**FIG.66**

- : SOURCE PACKET CONTAINING FIRST BYTE OF SEQUENCE HEADER video\_PID=x
- : SOURCE PACKET CONTAINING FIRST BYTE OF SEQUENCE HEADER video\_PID=y
- : SOURCE PACKET CONTAINING FIRST BYTE OF SEQUENCE HEADER video\_PID=z

**FIG.67**

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**FIG.68****FIG.69**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
<b>EP_map()</b>		
<b>reserved</b>	12	bslbf
<b>EP_type</b>	4	uimsbf
<b>number_of_stream_PIDs</b>	16	uimsbf
<b>for (k=0;k&lt;number_of_stream_PIDs;k++) {</b>		
<b>stream_PID(k)</b>	16	bslbf
<b>num_EP_entries(k)</b>	32	uimsbf
<b>EP_map_for_one_stream_PID_Start_address(k)</b>	32	uimsbf
<b>}</b>		
<b>for (i=0;i&lt;X;i++) {</b>		
<b>padding_word</b>	16	bslbf
<b>}</b>		
<b>for (k=0;k&lt;number_of_stream_PIDs;k++) {</b>		
<b>EP_map_for_one_stream_PID(num_EP_entries(k))</b>		
<b>for (i=0;i&lt;Y;i++) {</b>		
<b>padding_word</b>	16	bslbf
<b>}</b>		
<b>}</b>		
<b>}</b>		

FIG.70

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EP_type	MEANING
0	video
1	audio
2-15	reserved

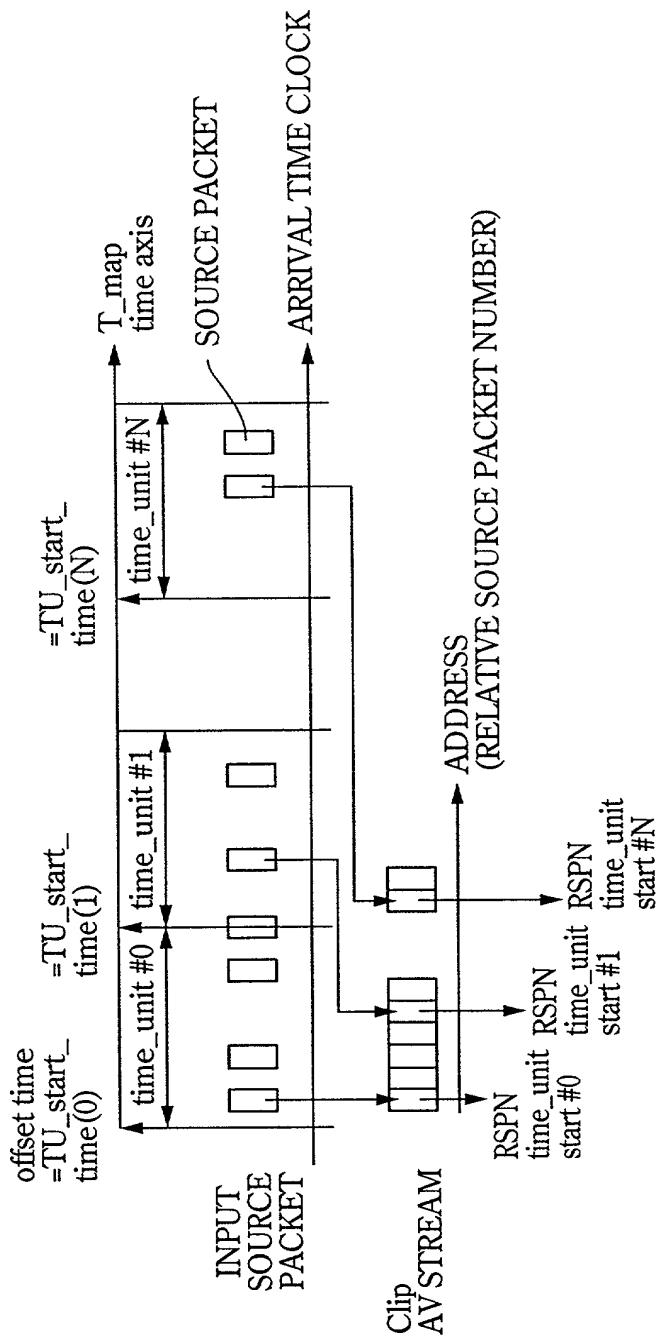
**FIG.71**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
EP_map_for_one_stream_PID( $N$ ) {		
for ( $i=0;i<N;i++$ ) {		
PTS_EP_start	32	uimsbf
RSPN_EP_start	32	uimsbf
}		
}		

FIG.72

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**FIG.73**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
TU_map()		
<b>offset_time</b>	32	bslbf
<b>time_unit_size</b>	32	uimsbf
<b>number_of_time_unit_entries</b>	32	uimsbf
<b>for (k=0;k&lt;number_of_time_unit_entries;k++)</b>		
<b>RSPN_time_unit_start</b>	32	uimsbf
}		

FIG.74

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
ClipMark0{		
version_number	8*4	bslbf
length	32	uimsbf
number_of_Clip_marks	16	uimsbf
for (i=0; i<number_of_clip_marks; i++){		
reserved	8	bslbf
mark_type	8	bslbf
mark_time_stamp	32	uimsbf
STC_sequence_id	8	uimsbf
reserved	24	bslbf
character_set	8	bslbf
name_length	8	uimsbf
mark_name	8*256	bslbf
ref_thumbnail_index	16	uimsbf
}		
}		

**FIG.75**

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10018846-DRAFT

Mark_type	MEANING	COMMENT
0x00-0x8F	reserved	Reserved for PlayListMark0
0x90	Event-start mark	MARK POINT INDICATING PROGRAM START POINT
0x91	Local event-start mark	MARK POINT INDICATING LOCAL SCENE IN PROGRAM
0x92	Scene-start mark	MARK POINT SHOWING SCENE CHANGE POINT
0x93-0xFF	reserved	

FIG.76

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CPI_type in the PlayList0	SEMANTICS OF mark_time_stamp
EP_map type	mark_time_stamp MUST INDICATE UPPER 32 BITS OF 33 BIT LENGTH PTS CORRESPONDING TO PRESENTATION UNIT REFERENCED BY MARK.
TU_map type	mark_time_stamp MUST BE TIME ON TU_map_time_axis AND MUST BE ROUNDED TO time_unit PRECISION. mark_time_stamp IS CALCULATED BY FOLLOWING EQUATION: $\text{mark\_time\_stamp} = \text{TU\_start\_time \%}2^{32}$

FIG.77

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
menu.thmb/mark.thmb {		
reserved	256	bslbf
Thumbnail()		
for (i=0; i<N1; i++)		
padding_word	16	bslbf
}		

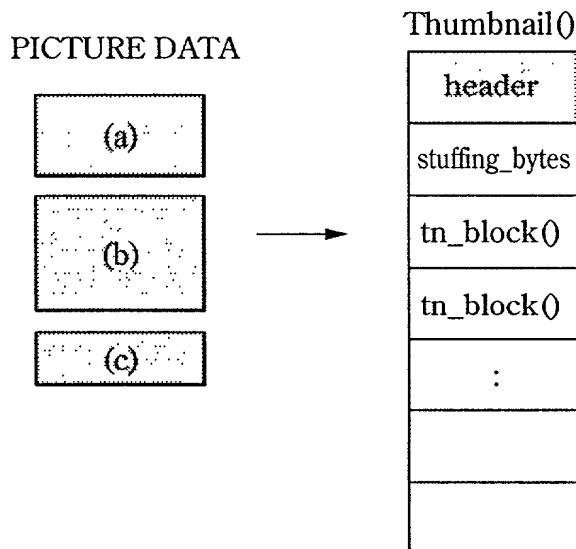
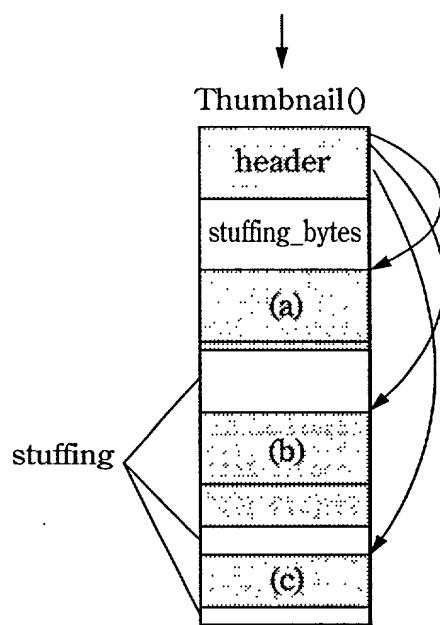
FIG.78

SYNTAX	NUMBER OF BYTES	ABBREVIATION
Thumbnail()		
<b>version_number</b>	8*4	char
<b>length</b>	32	uimsbf
if (length !=0){		
<b>tn_blocks_start_address</b>	32	bslbf
<b>number_of_thumbnails</b>	16	uimsbf
<b>tn_block_size</b>	16	uimsbf
<b>number_of_tn_blocks</b>	16	uimsbf
reserved	16	bslbf
for (i=0; i<number_of_thumbnails; i++){		
<b>thumbnail_index</b>	16	uimsbf
<b>thumbnail_picture_format</b>	8	bslbf
reserved	8	bslbf
<b>picture_data_size</b>	32	uimsbf
<b>start_tn_block_number</b>	16	uimsbf
<b>x_picture_length</b>	16	uimsbf
<b>y_picture_length</b>	16	uimsbf
reserved	16	uimsbf
}		
<b>stuffing_bytes</b>	8*2*L1	bslbf
for(k=0; k<number_of_tn_blocks; k++){		
<b>tn_block</b>	tn_block_size*1024*8	
}		
}		
}		

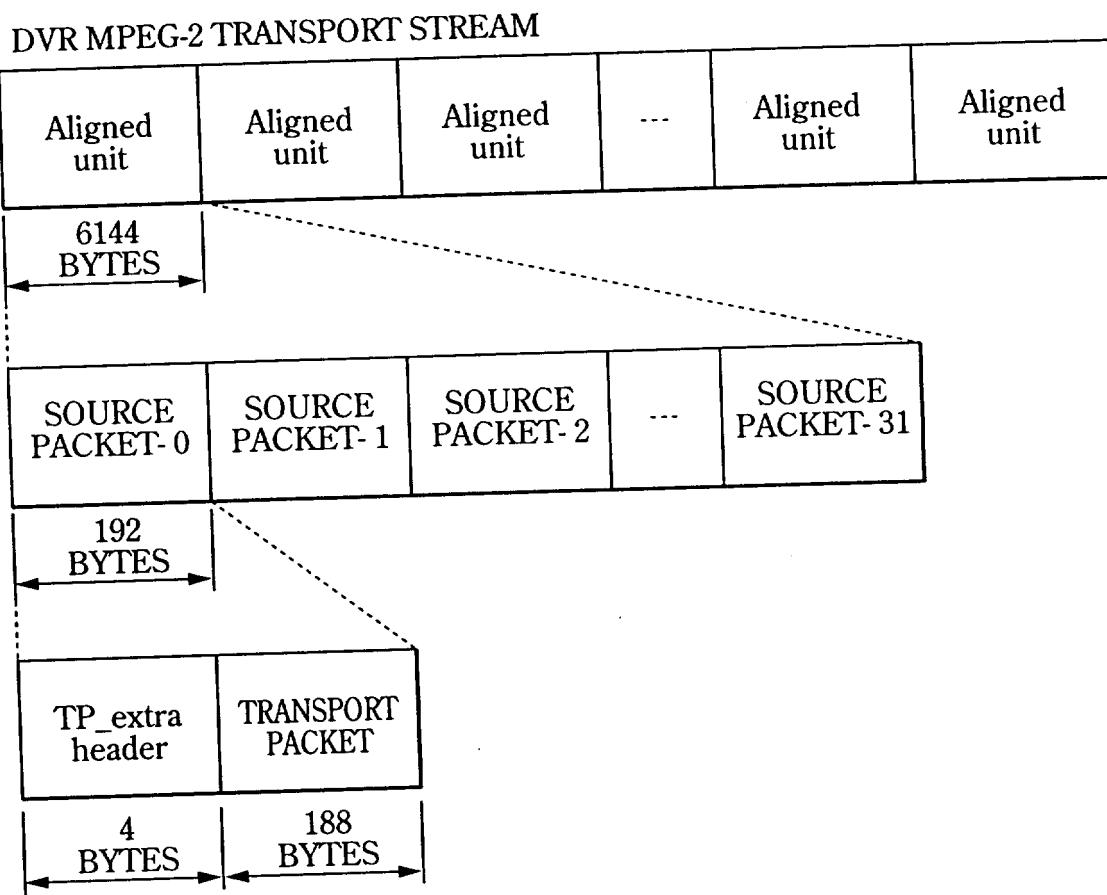
FIG.79

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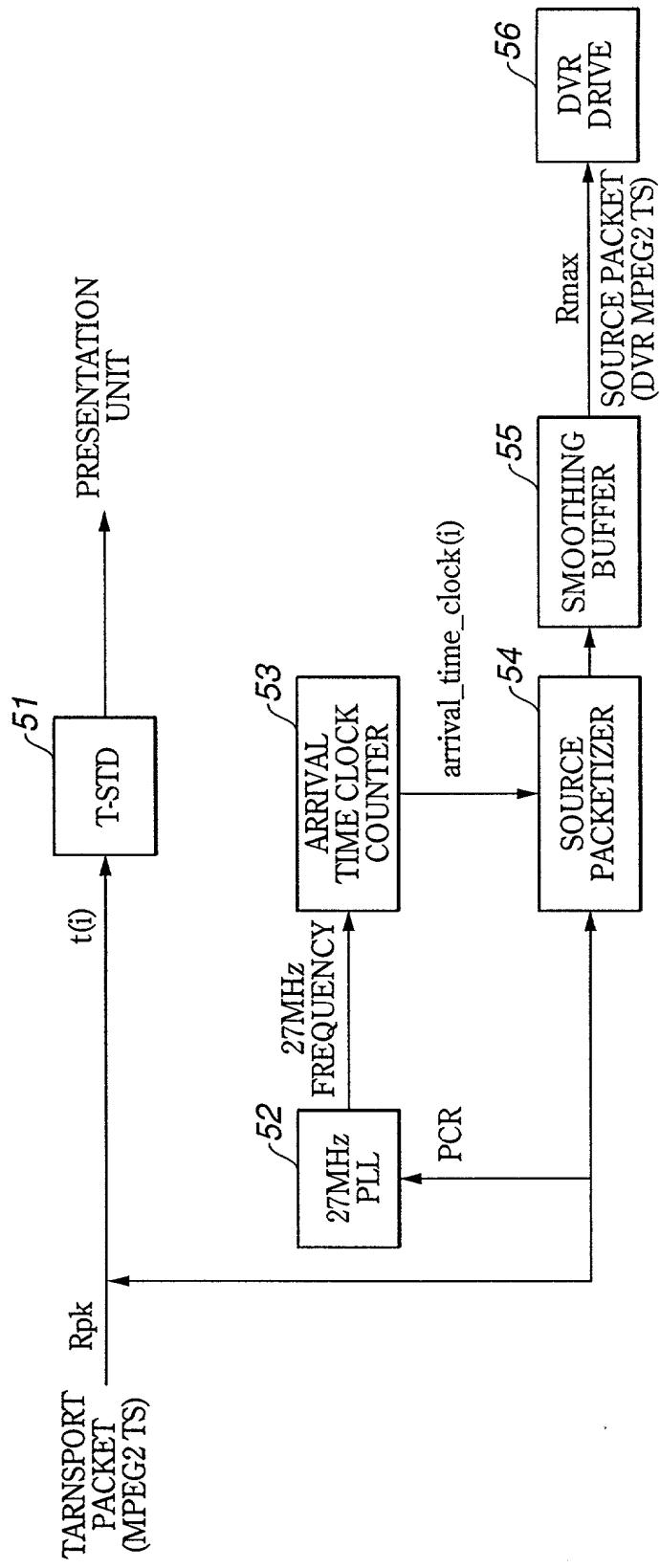
Thumbnail_picture_format	MEANING
0x00	MPEG-2 Video I-picture
0x01	DCF (restricted JPEG)
0x02	PNG
0x03-0xff	reserved

**FIG.80****FIG.81A****FIG.81 B**

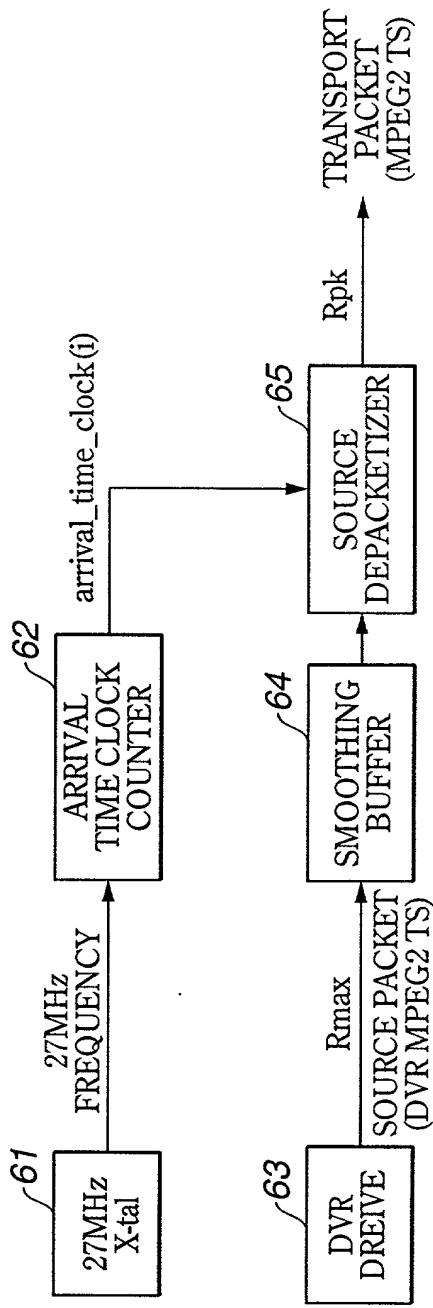
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**FIG.82**

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**FIG.83**

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**FIG.84**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
source_packet()		
TP_extra_header()		
transport_packet()		
}		

FIG.85

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
TP_extra_header0 {		
<b>copy_permission_indicator</b>	2	uimsbf
<b>arrival_time_stamp</b>	30	uimsbf
}		

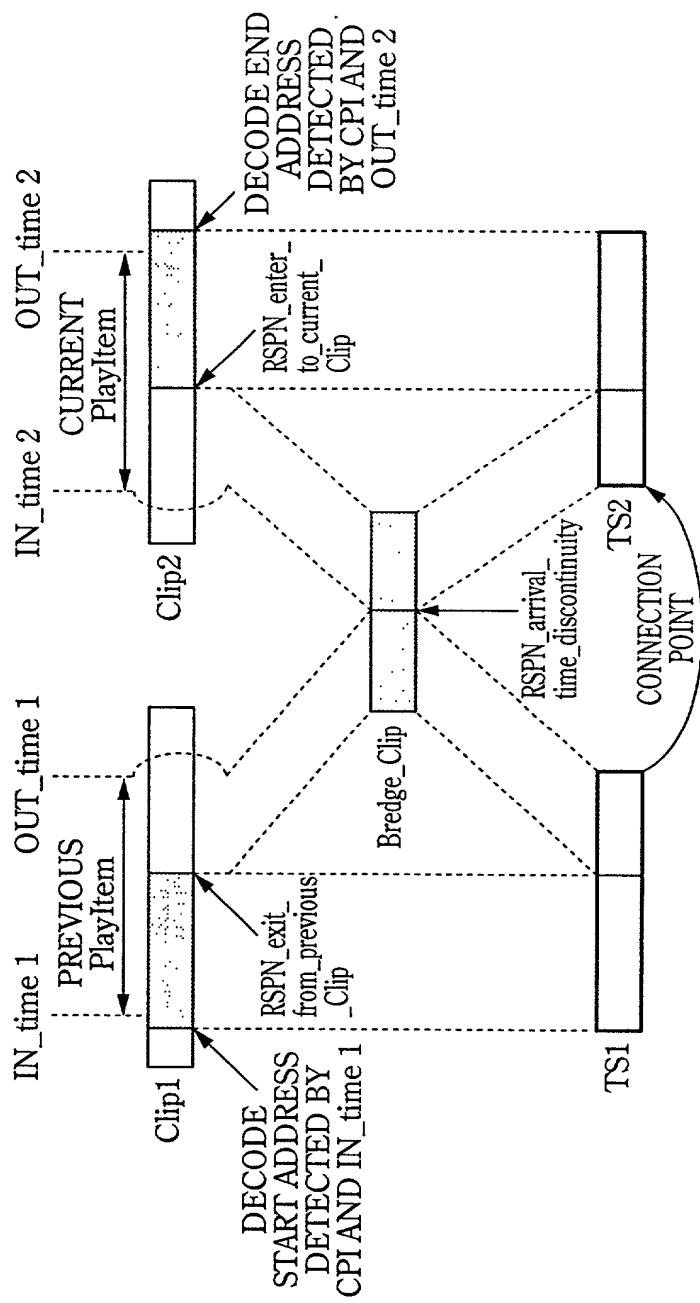
FIG.86

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copy_permission_indicator	MEANING
00	copy free
01	no more copy
10	copy once
11	copy prohibited

**FIG.87**

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**FIG.88**

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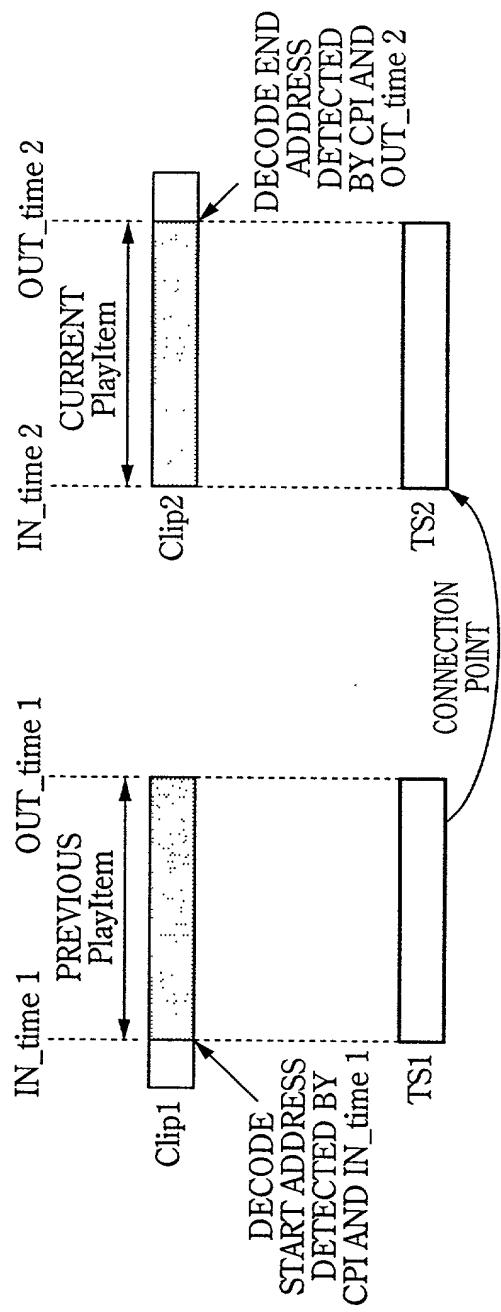
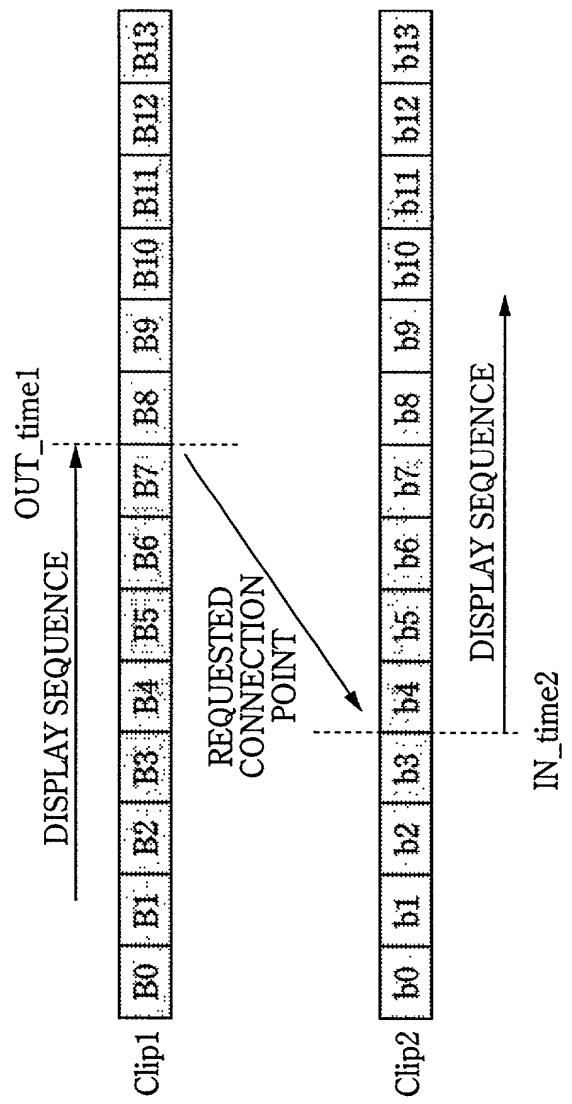
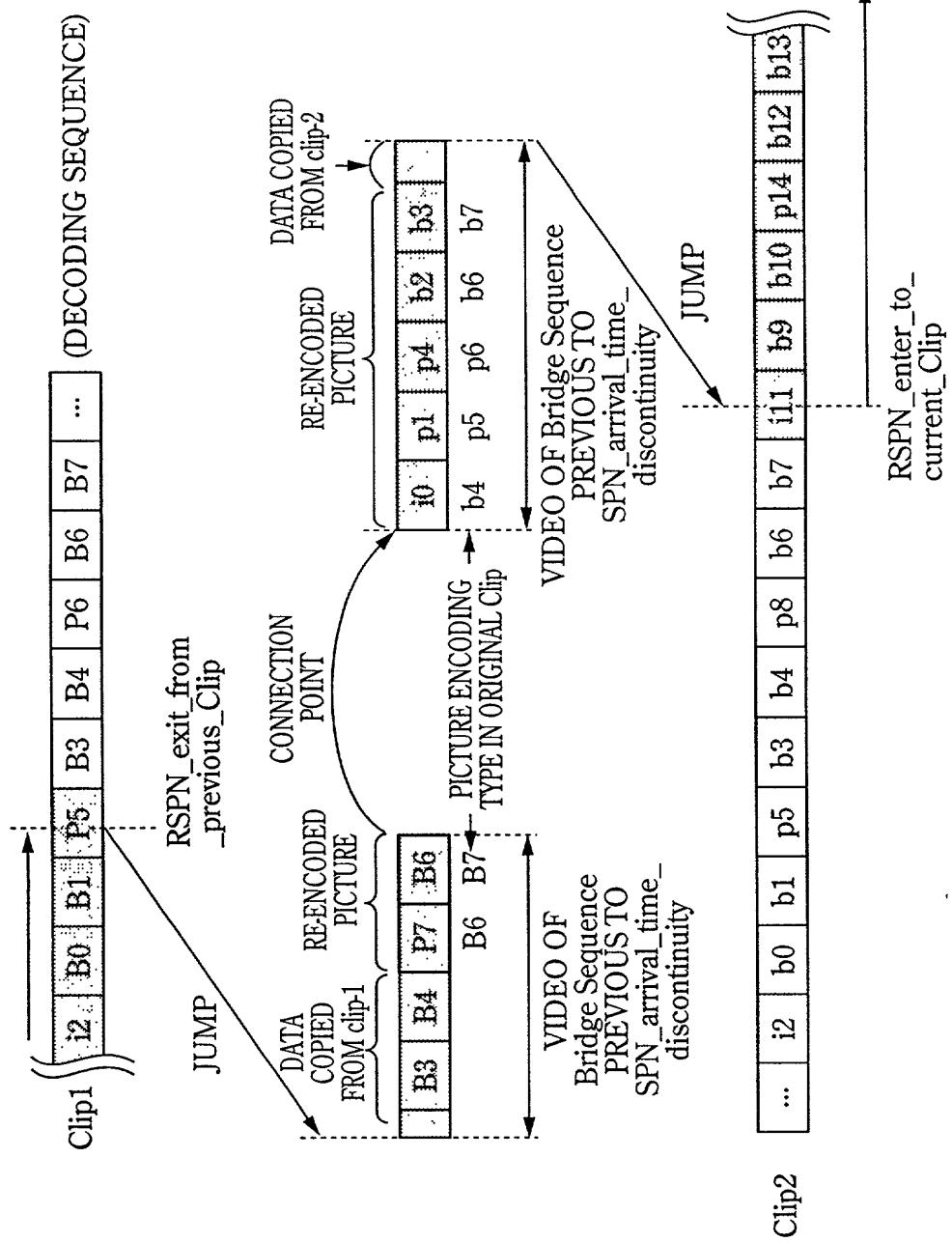


FIG.89

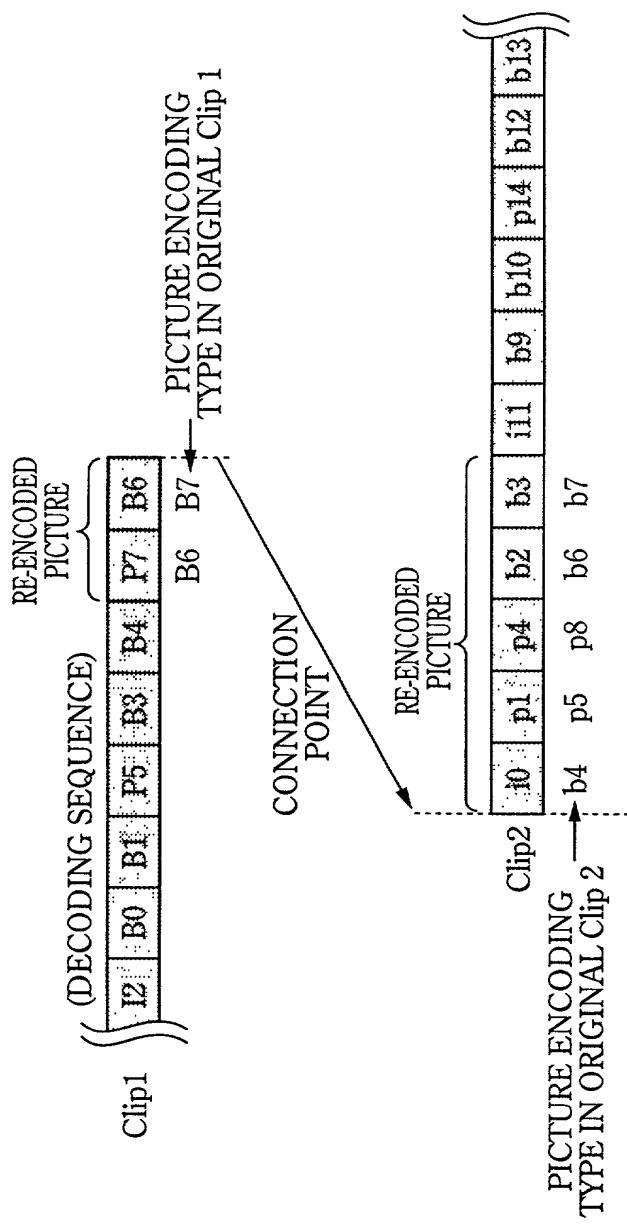
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**FIG.90**



**FIG. 91**

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**FIG.92**

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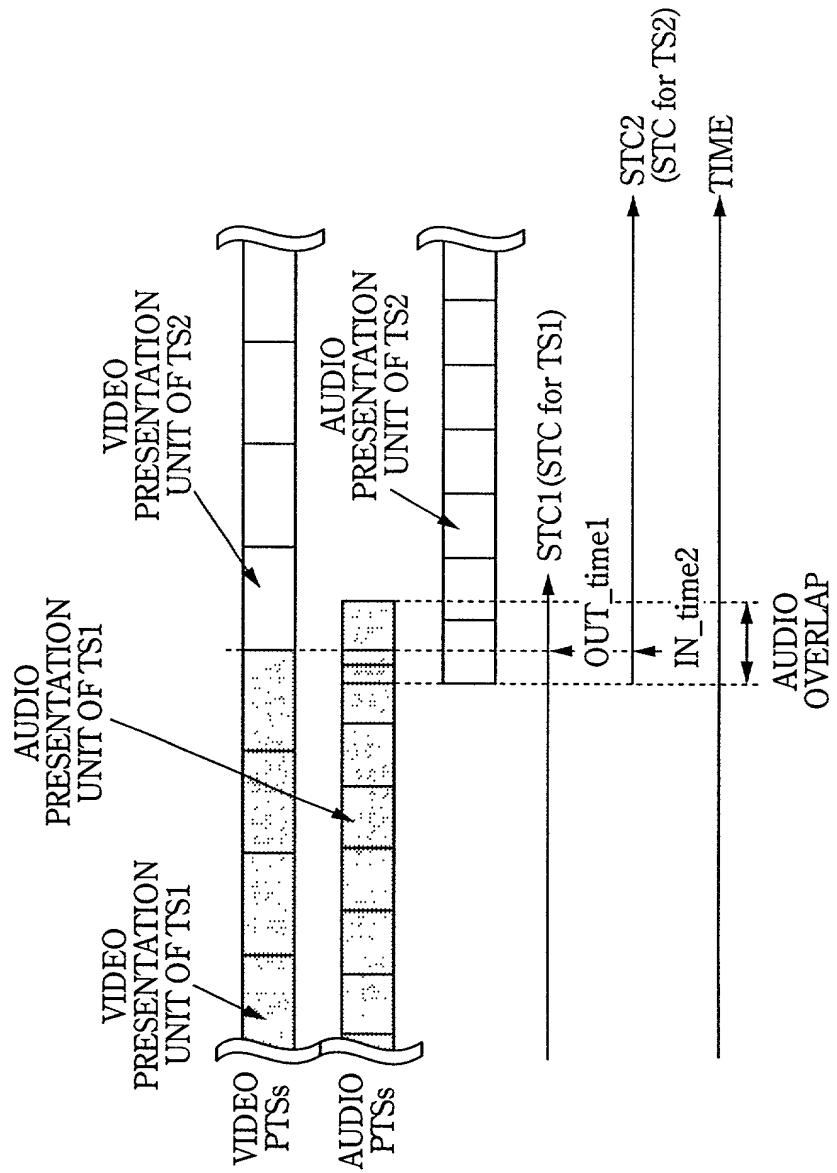
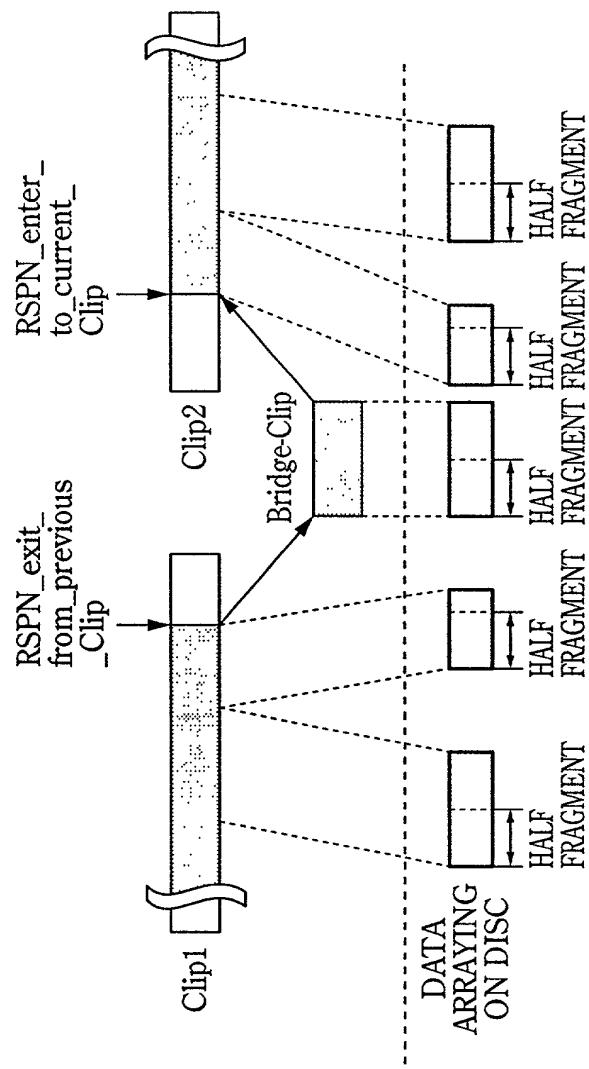
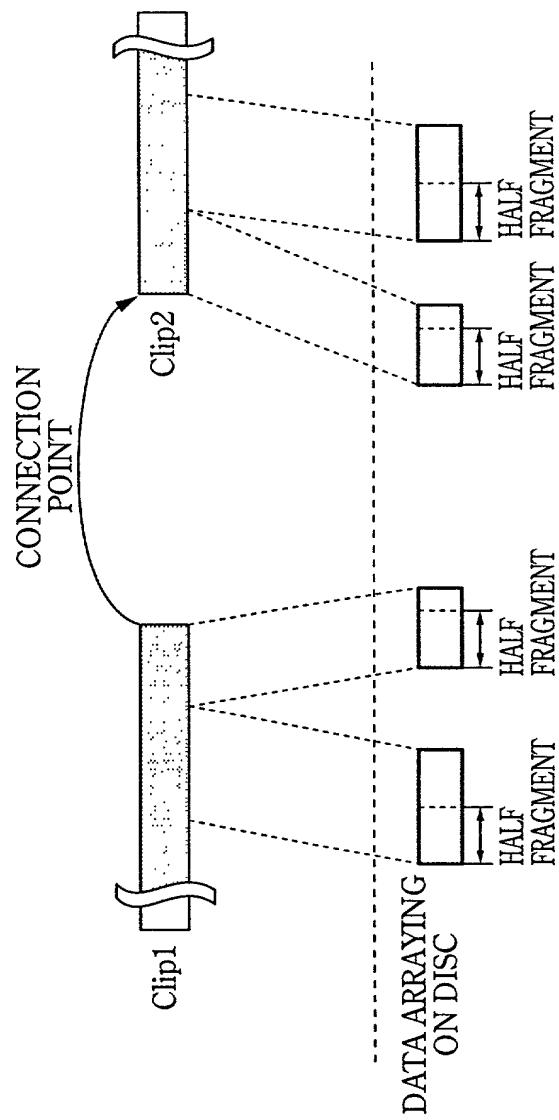


FIG.93

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**FIG.94**

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**FIG.95**

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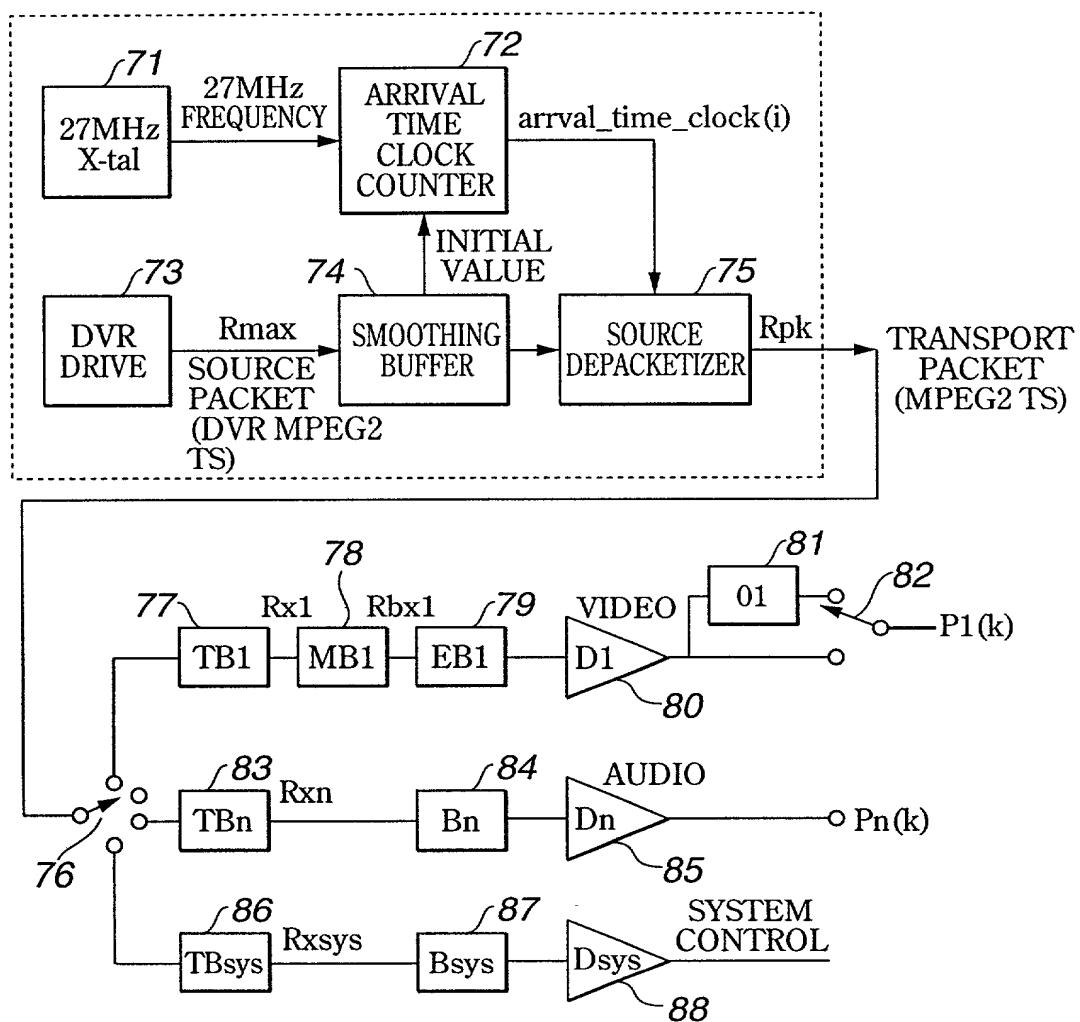
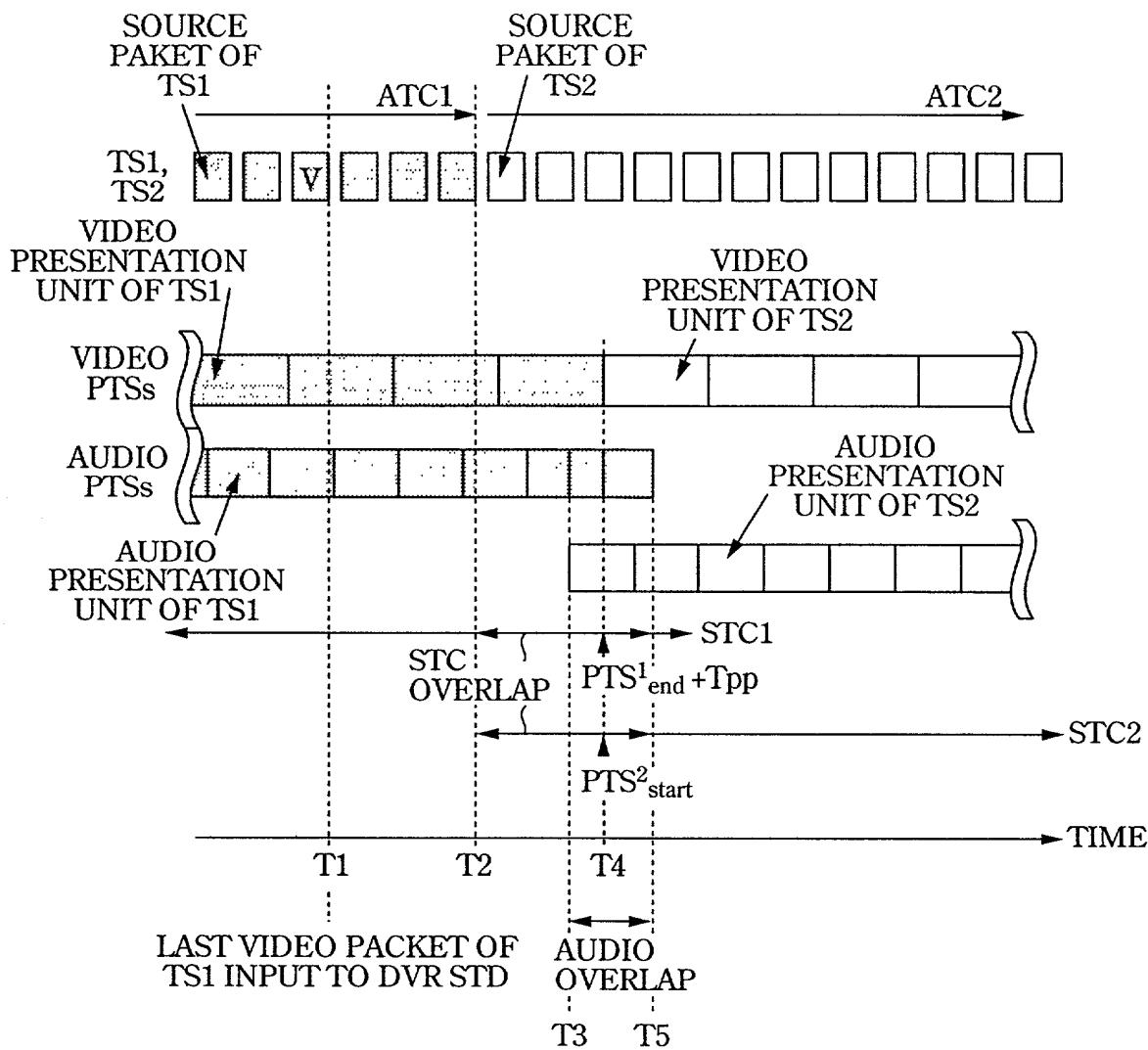


FIG.96

**FIG.97**

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
xxxxx.rpls / yyyy.ypls {		
version_number	8*4	bslbf
<b>PlayList_start_address</b>	32	uimsbf
<b>PlayListMark_start_address</b>	32	uimsbf
<b>MakersPrivateData_start_address</b>	32	uimsbf
reserved_for_future_use	160	bslbf
<b>UIAppInfoPlayList()</b>		
for (i=0;i<N1;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>PlayList()</b>		
for (i=0;i<N2;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>PlayListMark()</b>		
for (i=0;i<N3;i++){		
<b>padding_word</b>	16	bslbf
}		
<b>MakersPrivateData()</b>		
for (i=0;i<N4;i++){		
<b>padding_word</b>	16	bslbf
}		
}		

FIG.98

SYNTAX	NUMBER OF BYTES	ABBREVIATION
UIAppInfoPlayList()		
<b>length</b>	32	uimsbf
<b>PlayList_service_type</b>		
<b>PlayList_character_set</b>	8	uimsbf
<b>reserved_for_word_align</b>	3	bslbf
<b>playback_control_flag</b>	1	uimsbf
<b>write_protect_flag</b>	1	uimsbf
<b>is_played_flag</b>	1	uimsbf
<b>archive</b>	2	uimsbf
<b>record_time_and_date</b>	4*14	bslbf
<b>duration</b>	4*6	bslbf
<b>maker_ID</b>	16	uimsbf
<b>maker_model_code</b>	16	uimsbf
<b>ref_thumbnail_index</b>	16	uimsbf
<b>reserved</b>	7	bslbf
<b>rp_info_valid_flag</b>	1	uimsbf
<b>rp_ref_to_PlayItem_id</b>	16	uimsbf
<b>rp_time_stamp</b>	32	uimsbf
<b>channel_number</b>	16	uimsbf
<b>reserved_for_word_align</b>	8	bslbf
<b>channel_name_length</b>	8	uimsbf
<b>channel_name</b>	8*20	bslbf
<b>PlayList_name_length</b>	8	uimsbf
<b>PlayList_name</b>	8*255	bslbf
<b>PlayList_detail_length</b>	16	uimsbf
<b>PlayList_detail</b>	8*1200	bslbf
}		

FIG.99

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SYNTAX	NUMBER OF BYTES	ABBREVIATION
PlayList()		
<b>length</b>	32	uimsbf
<b>reserved_for_word_align</b>	15	bslbf
<b>CPI_type</b>	1	bslbf
<b>number_of_PlayItems</b>	16	uimsbf
if (<Virtual PlayList> && CPI_type==0){		
<b>number_of_SubPlayItems</b>	16	uimsbf
}else{		
<b>reserved_for_word_align</b>	16	bslbf
}		
for ( <i>PlayItem_id</i> =0; <i>PlayItem_id</i> < <i>number_of_PlayItems</i> ; <i>PlayItem_id</i> ++) {		
<b>PlayItem()</b>		
}		
if (<Virtual PlayList>&& CPI_type==0){		
for (i=0; i< <i>number_of_SubPlayItems</i> ; i++)		
<b>SubPlayItem()</b>		
}		
}		
}		

FIG.100

SYNTAX	NUMBER OF BYTES	ABBREVIATION
SubPlayItem()		
length	16	uimsbf
Clip_Information_file_name	8*10	bslbf
SubPath_type	8	bslbf
STC_sequence_id	8	uimsbf
SubPath_IN_time	32	uimsbf
SubPath_OUT_time	32	uimsbf
sync_PlayItem_id	16	uimsbf
sync_start PTS_of_PlayItem	32	uimsbf
}		

FIG.101

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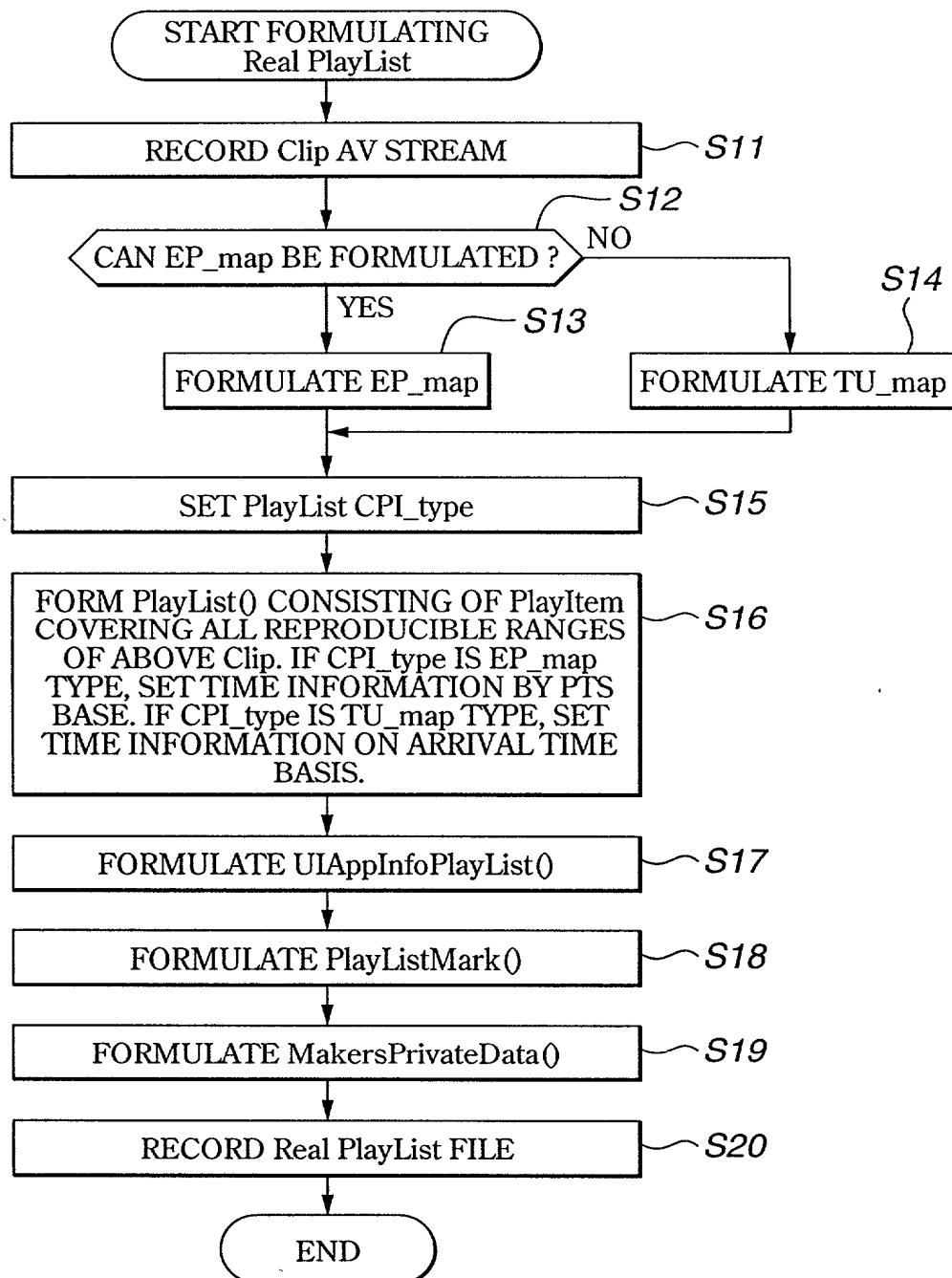


FIG.102

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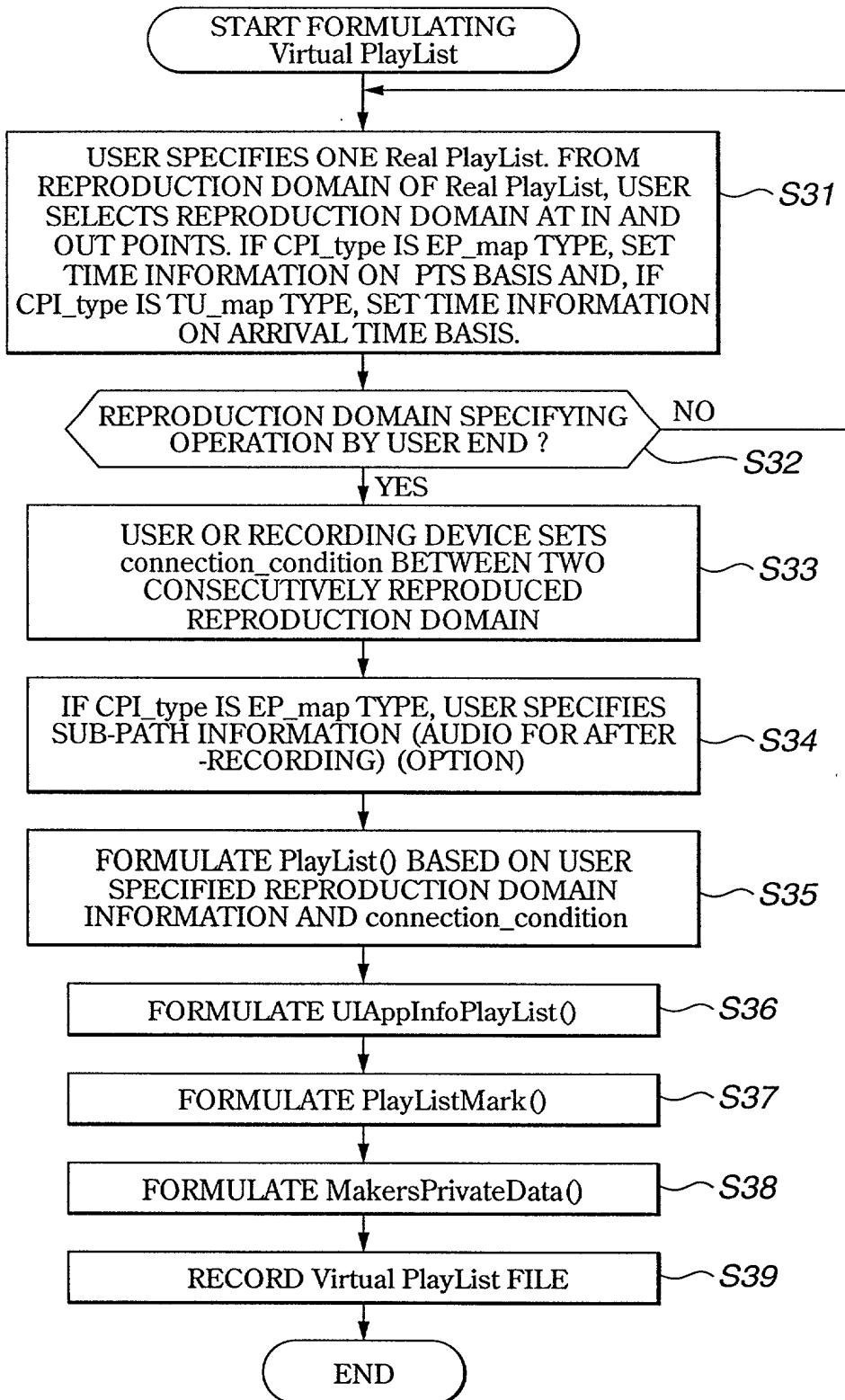
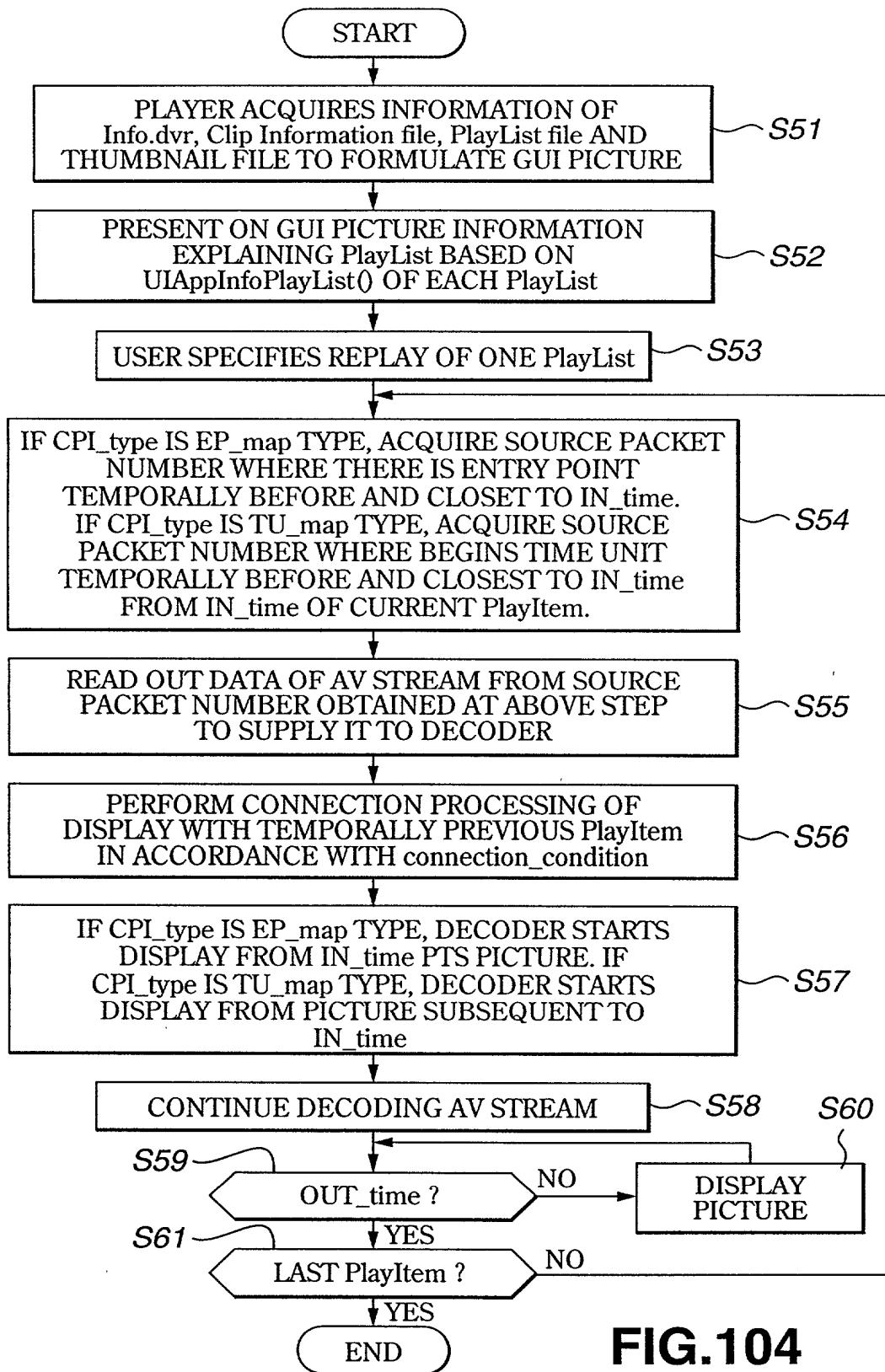


FIG.103

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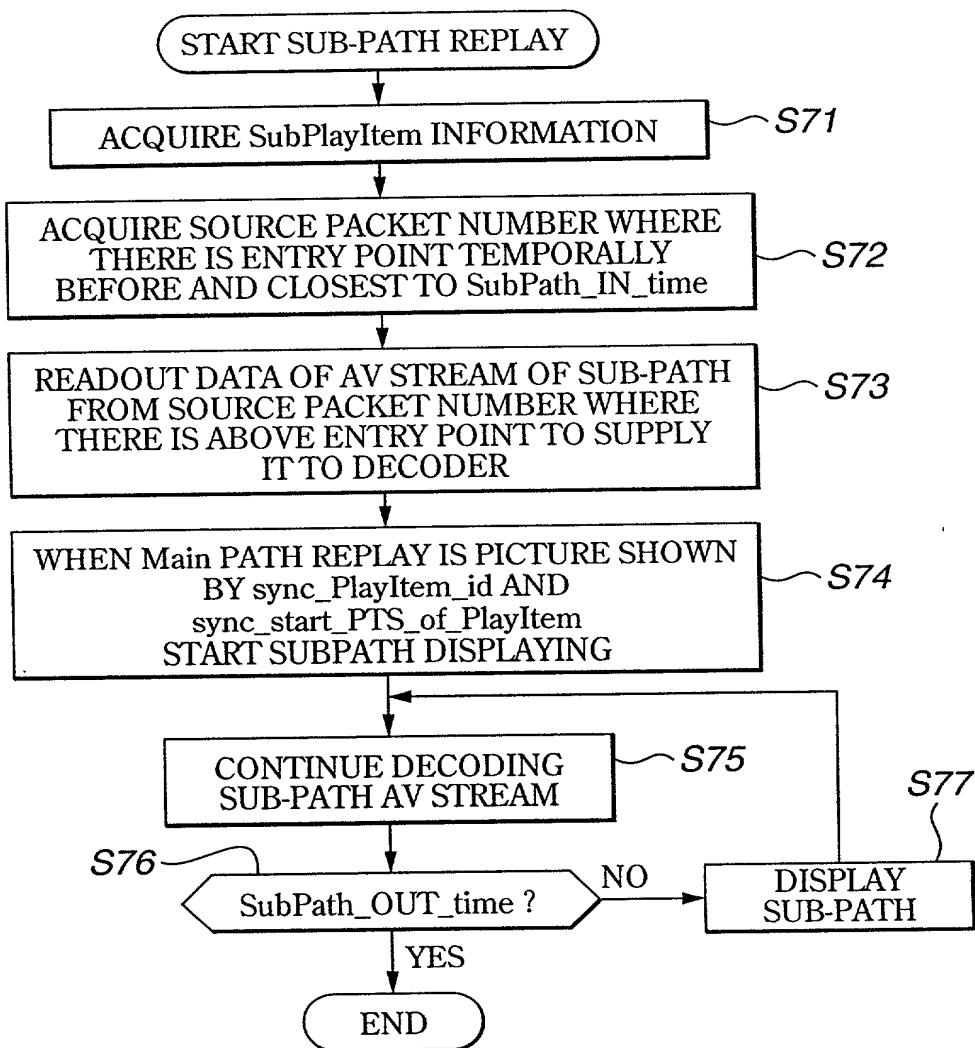
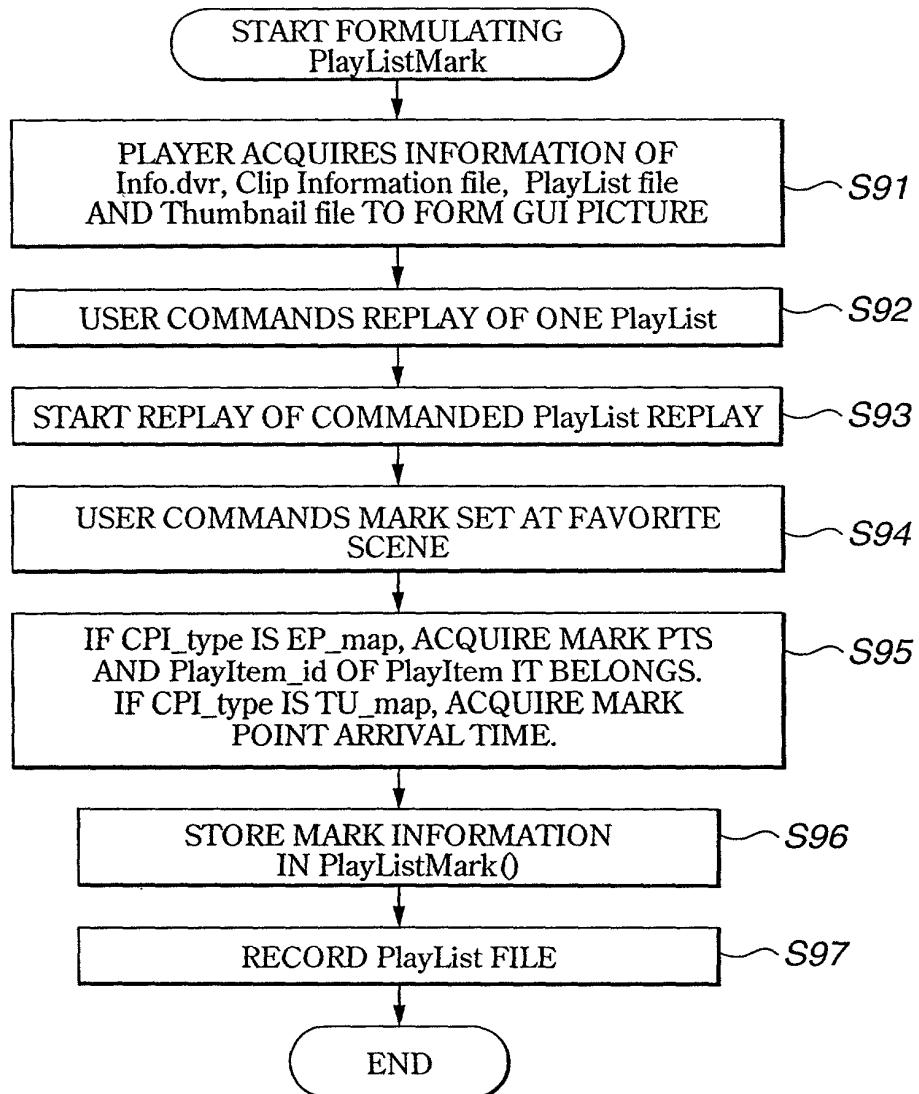
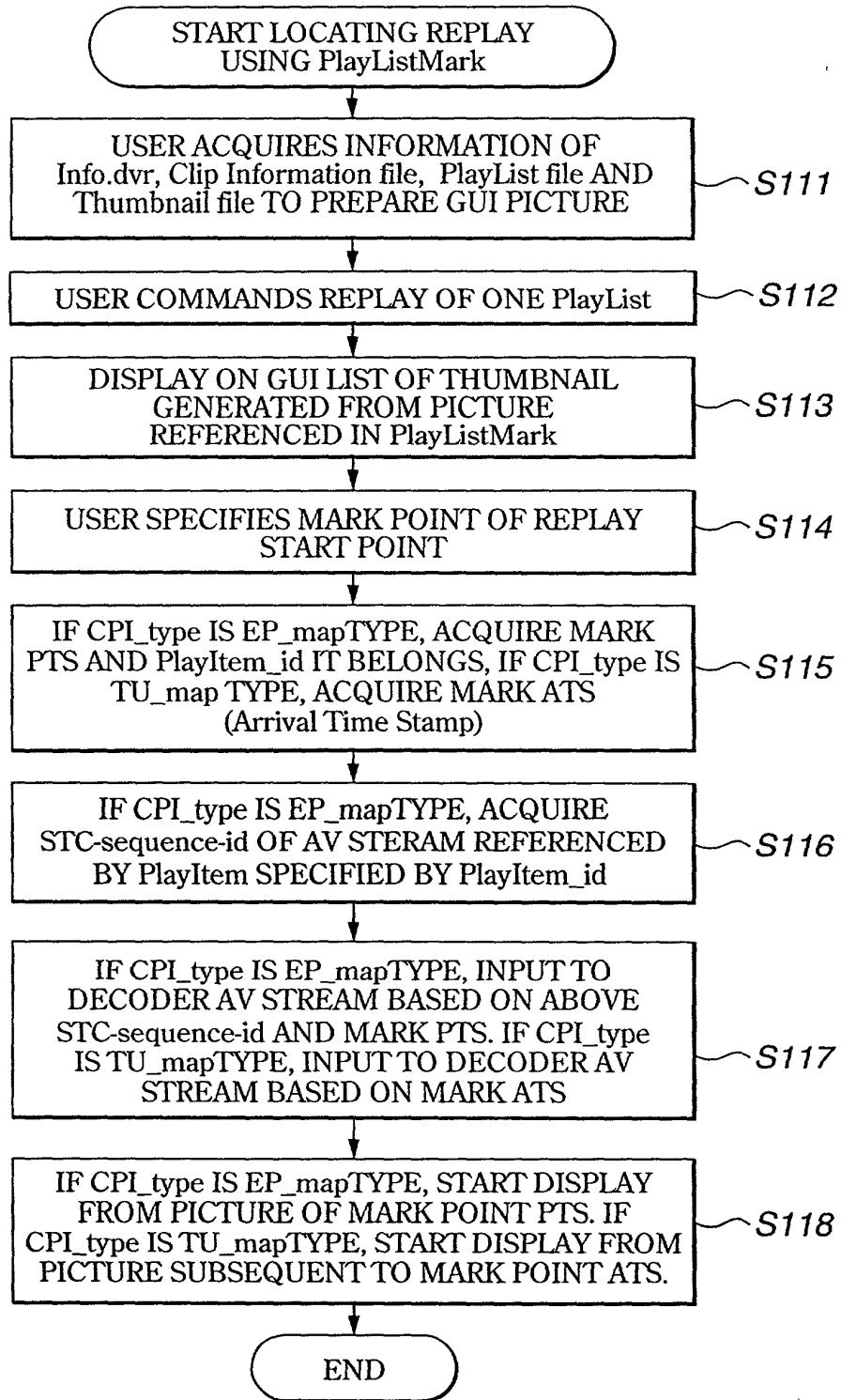


FIG.105

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**FIG.106**

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**FIG.107**

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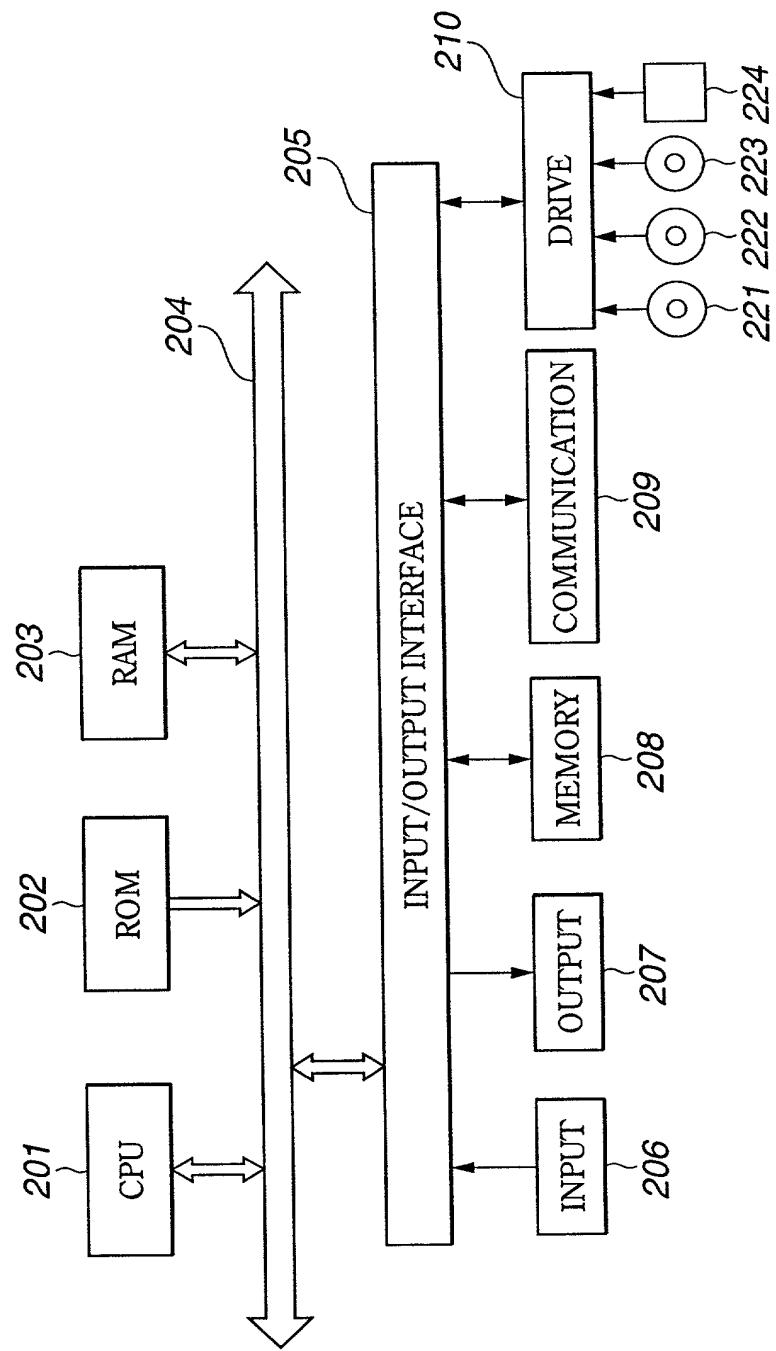


FIG.108